ANALOG INPUT BOX

AI8

SERVICE MANUAL



MODEL	REFERENCE SERVICE MANUAL	
AI8-ML8	LMY2-ML	PA011502
AI8-AD8	LMY4-AD	PA011503
AI8-ML4AD4	LMY4-AD	PA011503
	LMY2-ML	PA011502
AI8-ML8AB	LMY2-MLAB	PA011736
AI8-ML8F	LMY4-MLF	PA011737

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PA 011505

YAMAHA
HAMAMATSU, JAPAN

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<PARTS LIST>

<CIRCUIT DIAGRAM>

IMPORTANT NOTICE

This manual has been provided for the use of authorized Yamaha Retailers and their service personnel. It has been assumed that basic service procedures inherent to the industry, and more specifically Yamaha Products, are already known and understood by the users, and have therefore not been restated.

WARNING: Failure to follow appropriate service and safety procedures when servicing this product may result in personal injury, destruction of expensive components and failure of the product to perform as specified. For these reasons, we advise all Yamaha product owners that all service required should be performed by an authorized Yamaha Retailer or the appointed service representative.

IMPORTANT: This presentation or sale of this manual to any individual or firm does not constitute authorization, certification, recognition of any applicable technical capabilities, or establish a principal-agent relationship of any form.

The data provided is belived to be accurate and applicable to the unit(s) indicated on the cover. The research engineering, and service departments of Yamaha are continually striving to improve Yamaha products. Modifications are, therefore, inevitable and changes in specification are subject to change without notice or obligation to retrofit. Should any discrepancy appear to exist, please contact the distributor's Service Division.

WARNING: Static discharges can destroy expensive components. Discharge any static electricity your body may have accumulated by grounding yourself to the ground bus in the unit (heavy gauge black wires connect to this bus).

IMPORTANT: Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

WARNING: CHEMICAL CONTENT NOTICE!

The solder used in the production of this product contains LEAD. In addition, other electrical/electronic and/or plastic (where applicable) components may also contain traces of chemicals found by the California Health and Welfare Agency (and possibly other entities) to cause cancer and/or birth defects or other reproductive harm.

DO NOT PLACE SOLDER, ELECTRICAL/ELECTRONIC OR PLASTIC COMPONENTS IN YOUR MOUTH FOR ANY REASON WHAT SO EVER!

Avoid prolonged, unprotected contact between solder and your skin! When soldering, do not inhale solder fumes or expose eyes to solder/flux vapor!

If you come in contact with solder or components located inside the enclosure of this product, wash your hands before handling food.

IMPORTANT NOTICE FOR THE UNITED KINGDOM

Connecting the Plug and Cord

IMPORTANT. The wires in this main lead are coloured in accordance with the following code:

BLUE: NEUTRAL
BROWN: LIVE

As the colours of the wires in the main lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The BLUE wire must be connected to the terminal that is marked with the letter N (or coloured BLACK).

The BROWN wire must be connected to the terminal that is marked with the letter L (or coloured RED).

Be certain that neither core is connected to the earth terminal of the three pin plug.

■ WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

SPECIFICATIONS

Sampling frequency (external sync)	39.69 kHz – 50.88 kHz
Power supply	USA and Canada: 120 V, 60 Hz
	Others: 230 V, 50 Hz
Power consumption	120 W
Dimensions (W x H x D)	480 mm x 141.5 mm x 466.8 mm
Weight	15.4 kg
Operating temperature	10 – 35 ˚C
Power cable length	2.1 m
Cooling fan speed	always fixed
Accessories	Connection cable (68-pin, D-sub, half-pitch) x 1, Length: 3 m

Digital I/Os

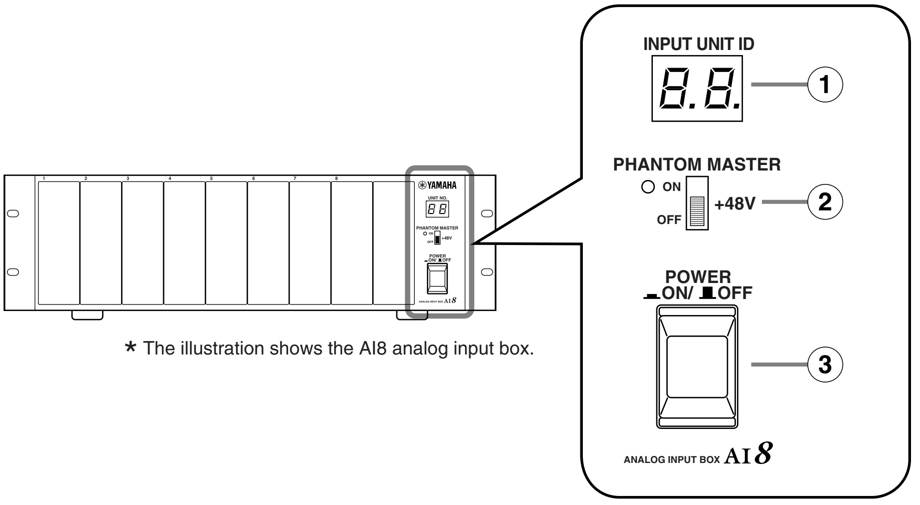
I/O connectors	Level	Type
OUTPUT A, B, C	RS-422	D-sub, half-pitch, 68-pin connector (female)
WORD CLOCK IN	TTL/75 Ω (ON/OFF)	BNC Connector
WORD CLOCK OUT	TTL/75 Ω	BNC Connector

Slots

Card	Input
LMY2-ML	Channel 1A or 1B, 2A or 2B
LMY4-AD	Channel 1 – 4

PANEL LAYOUT

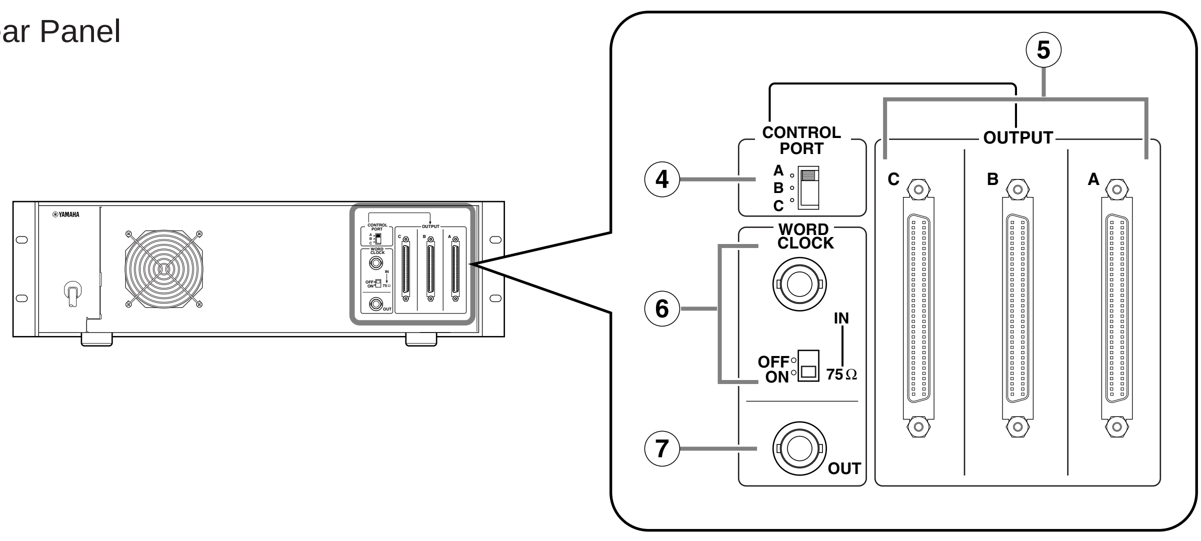
● Front Panel



* The illustration shows the AI8 analog input box.

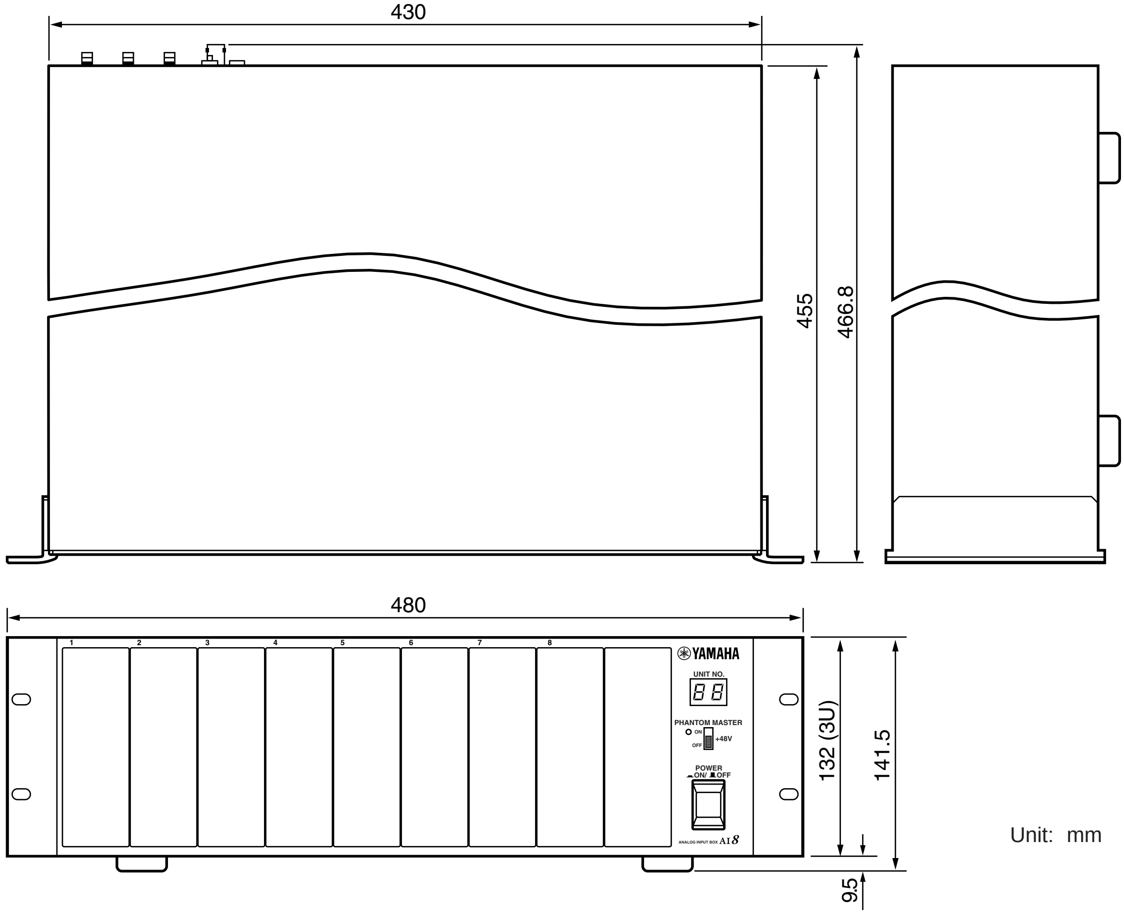
1. INPUT UNIT ID indicator
2. PHANTOM MASTER switch, indicator
3. POWER ON/OFF

● Rear Panel



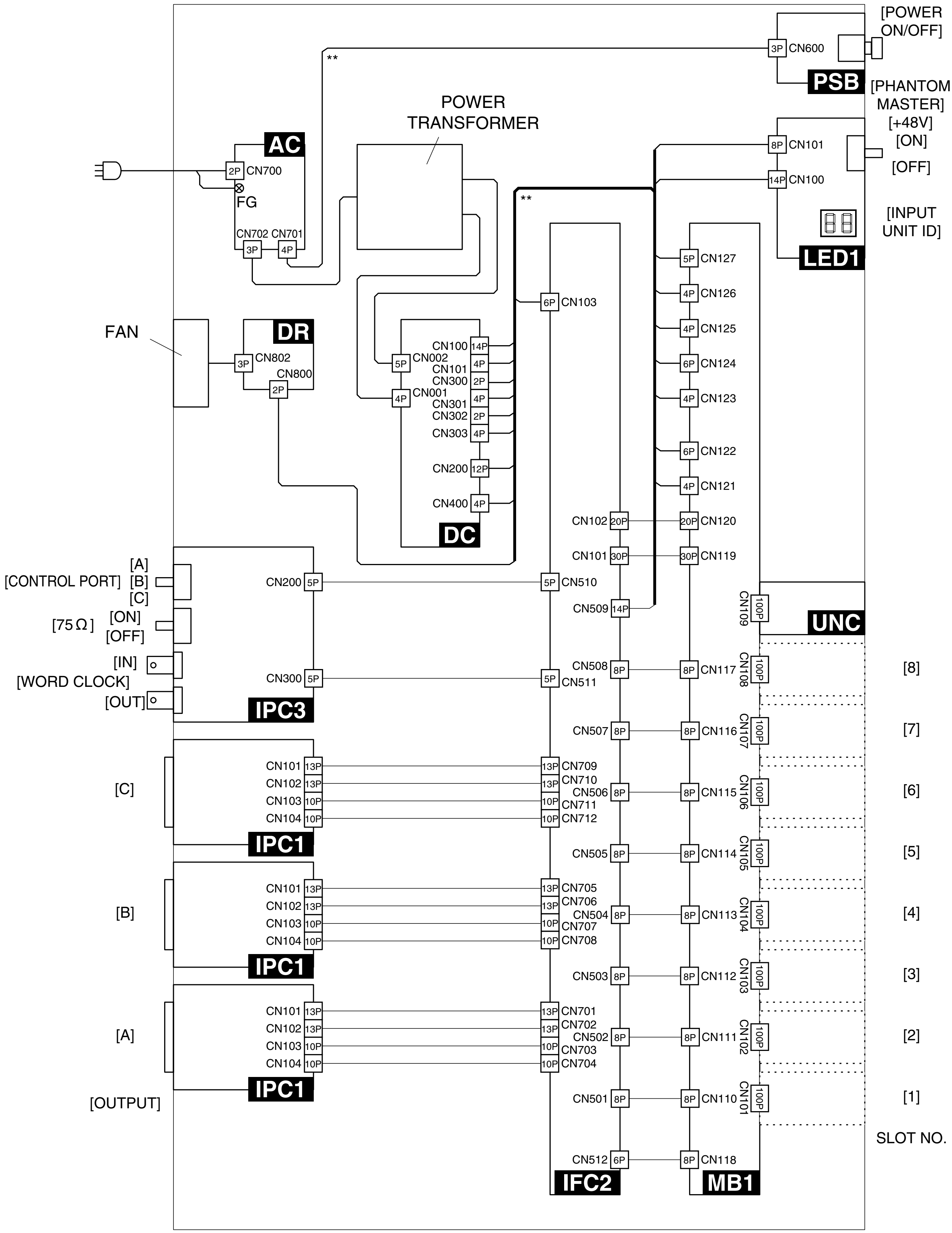
4. CONTROL PORT switch
5. OUTPUT connectors A, B, C
6. WORD CLOCK IN jack, ON/OFF switch
7. WORD CLOCK OUT jack

DIMENSIONS



Unit: mm

■ CONNECTOR CIRCUIT DIAGRAM



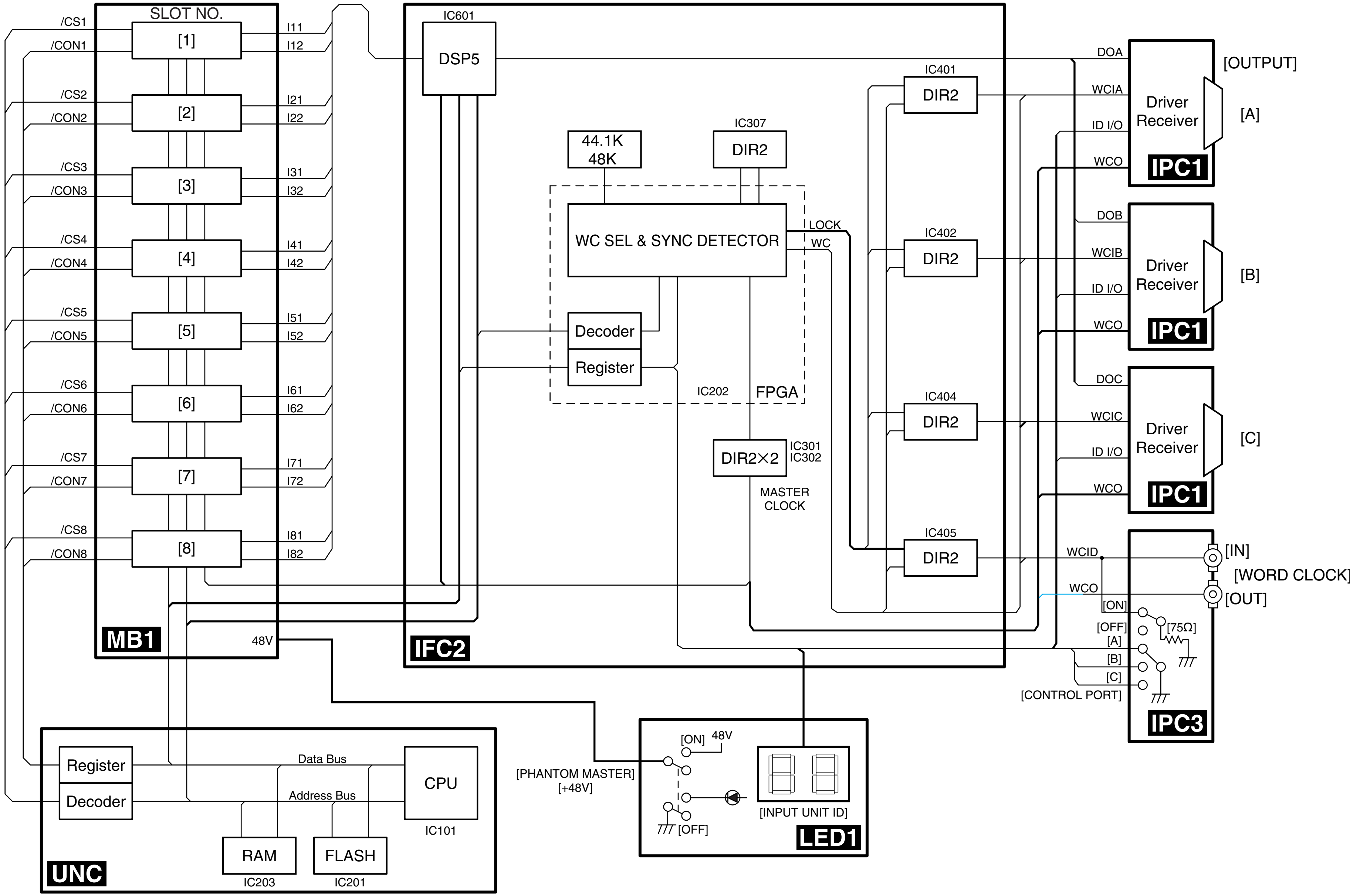
KEC-92522-2

Circuit Board	CN No.	Pin No.	Circuit Board	CN No.	Pin No.
DC	CN100	1	MB1	CN122	4
		2			3
		3	MB1	CN124	4
		4			3
		5	MB1	CN127	5
		6	IFC2	CN103	1
		7			2
		8	MB1	CN122	2
		9			1
		10	MB1	CN124	2
		11			1
		12	MB1	CN127	3
		13	IFC2	CN103	3
		14			4
DC	CN101	1	MB1	CN127	4
		2	IFC2	CN103	5
		3			6
DC	CN200	1	MB1	CN121	4
		2			3
		3	MB1	CN123	4
		4			3
		5	MB1	CN125	4
		6			3
		7	MB1	CN121	1
		8	MB1	CN123	1
		9	MB1	CN125	1
DC	CN300	1	DR	CN800	1
		2			2
DC	CN301	1	MB1	CN122	6
		2	MB1	CN124	6
DC	CN302	1	MB1	CN127	2
		2			1
DC	CN303	1	MB1	CN122	5
		2	MB1	CN124	2
DC	CN400	1	LED1	CN101	1
		2			2
		3			3
		4			4
IFC2	CN509	1	LED1	CN100	1
		2			2
		3			3
		4			4
		5			5
		6			6
		7			7
		8			8
		9			9
		10			10
		11			11
		12			12
		13			13
		14			14
MB1	CN126	1	LED1	CN101	7
		3	LED1	CN101	6
		4			5

AC	CN701	1	PSB	CN600	1
		4			3

KEC-92522-3

BLOCK DIAGRAM



DISASSEMBLY PROCEDURE

1. UNC Card Assembly

1-1 Remove the four (4) screws marked [470]. The UNC card assembly can them be removed. (Fig. 1)

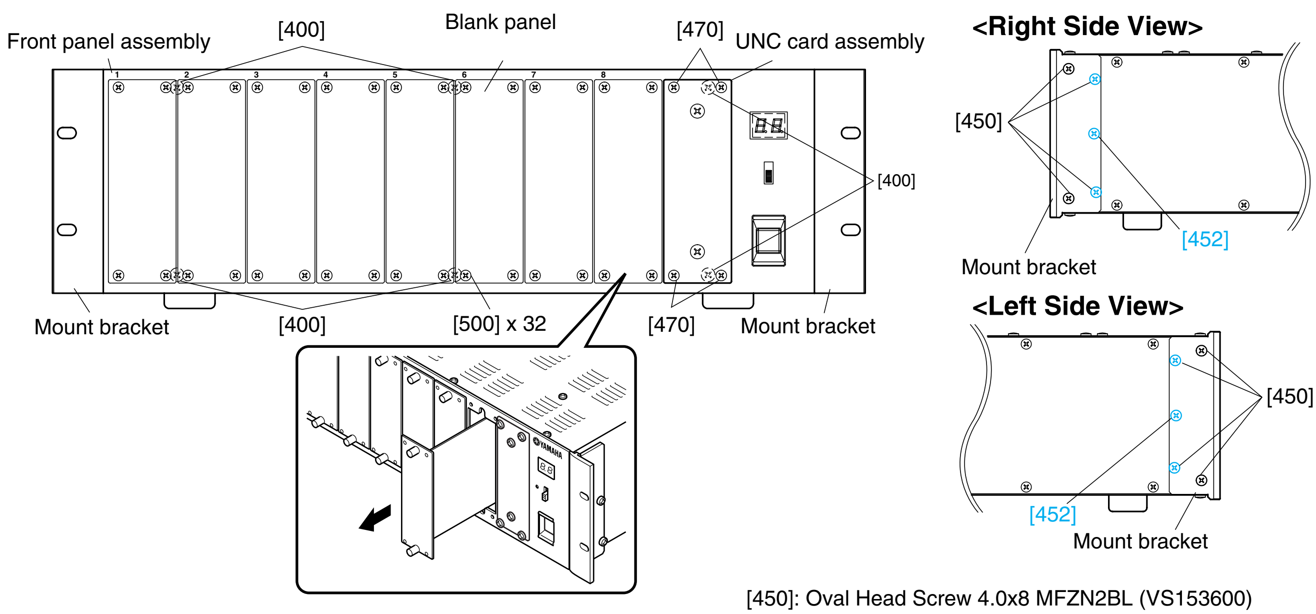
2. Front Panel Assembly

2-1 Remove the UNC card assembly. (See Procedure 1.)

2-2 Remove the thirty-two (32) screws marked [500]. The blank panel can then be removed. (Fig. 1)

2-3 Remove the eight (8) screws marked [450] and the two (2) screws marked [452]. Each mount bracket can then be removed. (Fig. 1)

2-4 Remove the six (6) screws marked [400]. The front panel assembly can then be removed. (Fig. 1)



[470]: Bonding Screw 3.0x6 MFZN2BL (VS863000)
[400]: Flat Head Screw 4.0x8 MFZN2BL (VA221200)

[450]: Oval Head Screw 4.0x8 MFZN2BL (VS153600)
[452]: Oval Head Screw B4.0x8 MFZN2BL (V6221000)
[500]: Bonding Screw 3.0x6 MFZN2BL (VS863000)

Fig. 1

3. LED1 Circuit Board

3-1 Remove the front panel assembly. (See Procedure 2.)

3-2 Remove the two (2) screws marked [80]. The LED1 circuit board can then be removed. (Fig. 2)

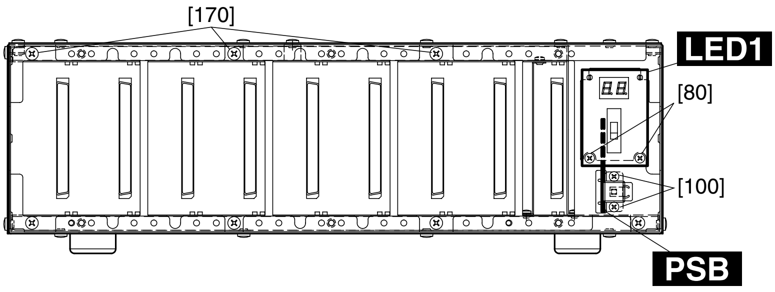
4. PSB Circuit Board

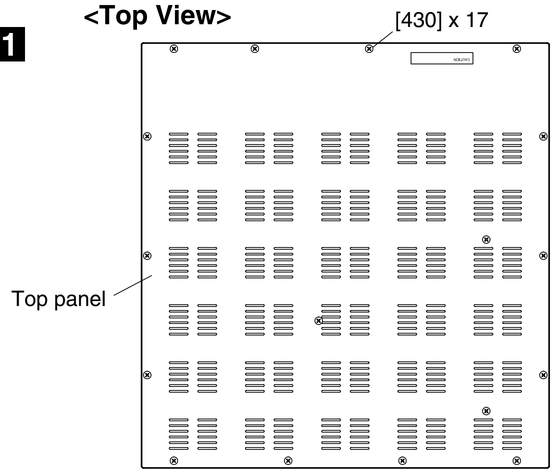
4-1 Remove the UNC card assembly. (See Procedure 1.)

4-2 Remove the front panel assembly. (See Procedure 2.)

4-3 Remove the seventeen (17) screws marked [430]. The top panel can then be removed. (Fig. 2)

4-4 Remove the two (2) screws marked [100]. The PSB circuit board can then be removed. (Fig. 2)





[80]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)
[100]: Bind Head Screw 3.0x8 MFZN2BL (VB659000)
[170]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[430]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)

Fig. 2

5. Circuit Boards and Units

Remove the top panel, each circuit board and unit can then be removed. (Fig. 3)

Circuit Board and Unit	Ref. No.	Screw	QTY
IPC1	A	Screw	2
IPC3	310	Bonding Screw 3.0x6 MFZN2BL (VS863000)	2
	320	Bind Head Screw A4.0x6 MFZN2BL (EG340290)	2
DR	380	Bonding Tapping Screw-B (VN413300)	2
Power Transformer	240	Bonding Tapping Screw-B (VC688800)	4

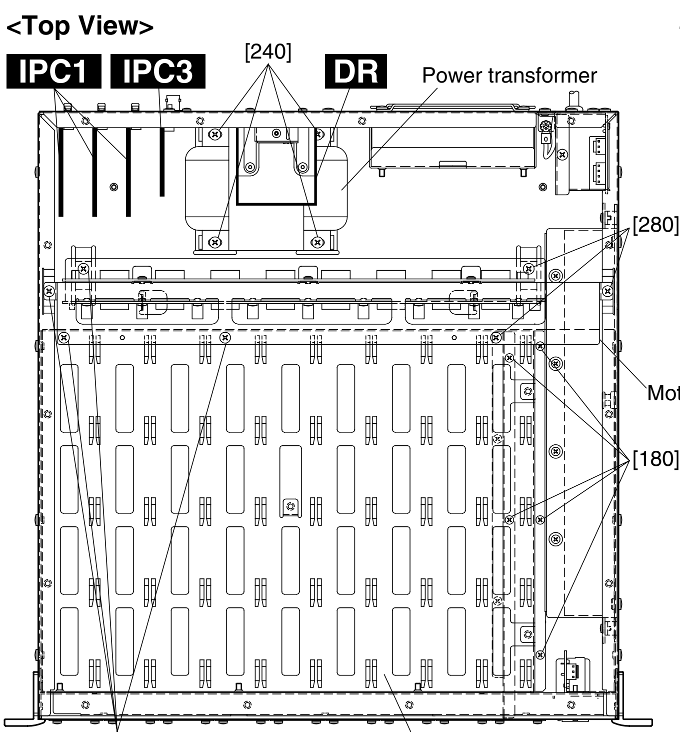
6. Mother Assembly

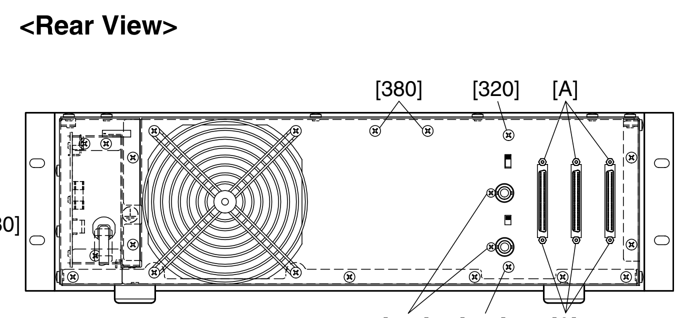
6-1 Remove the UNC card assembly. (See Procedure 1.)

6-2 Remove the front panel assembly. (See Procedure 2.)

6-3 Remove the top panel. (See Procedure 4-3.)

6-4 Remove the seven (7) screws marked [280]. The mother assembly can then be removed. (Fig. 3)





[180]: Bind Head Tapping Screw-B A3.0x6 MFZN2BL (VP157900)
[280]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)

Fig. 3

7. MB1 Circuit Board

7-1 Remove the mother assembly. (See Procedure 6.)

7-2 Remove the nine (9) screws marked [30] and the five (5) screws marked [50]. The MB1 circuit board can then be removed. (Fig. 4)

8. IFC2 Circuit Board

8-1 Remove the mother assembly. (See Procedure 6.)

8-2 Remove the six (6) screws marked [70]. The IFC2 circuit board can then be removed. (Fig. 4)

9. Side Panel Assembly

9-1 Remove the UNC card assembly. (See Procedure 1.)

9-2 Remove the front panel assembly. (See Procedure 2.)

9-3 Remove the top panel. (See Procedure 4-3.)

9-4 Remove the mother assembly. (See Procedure 6.)

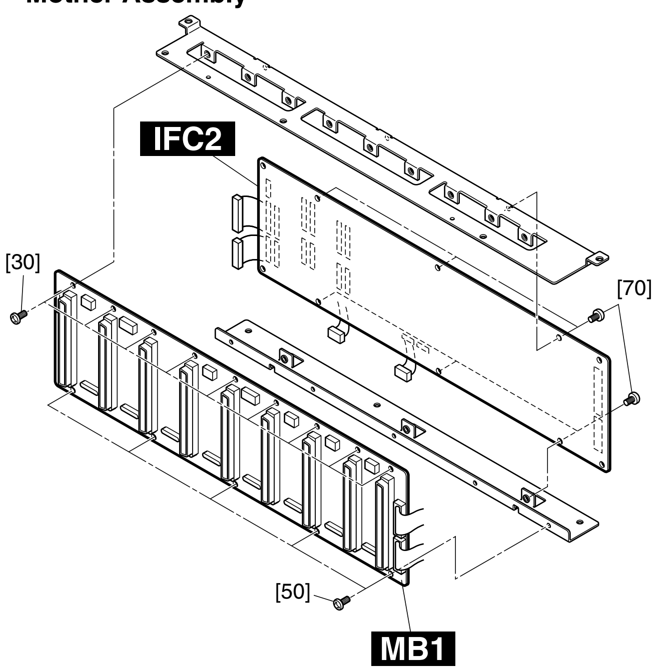
9-5 Remove the eight (8) screws marked [450] and the two (2) screws marked [452]. Each mount bracket can then be removed. (Fig. 5)

9-6 Remove the seven (7) screws marked [200]. The side panel (L) can then be removed. (Fig. 5)

9-7 Remove the three (3) screws marked [170] and the five (5) screws marked [180]. The upper chassis can then be removed. (Fig. 2, Fig. 3)

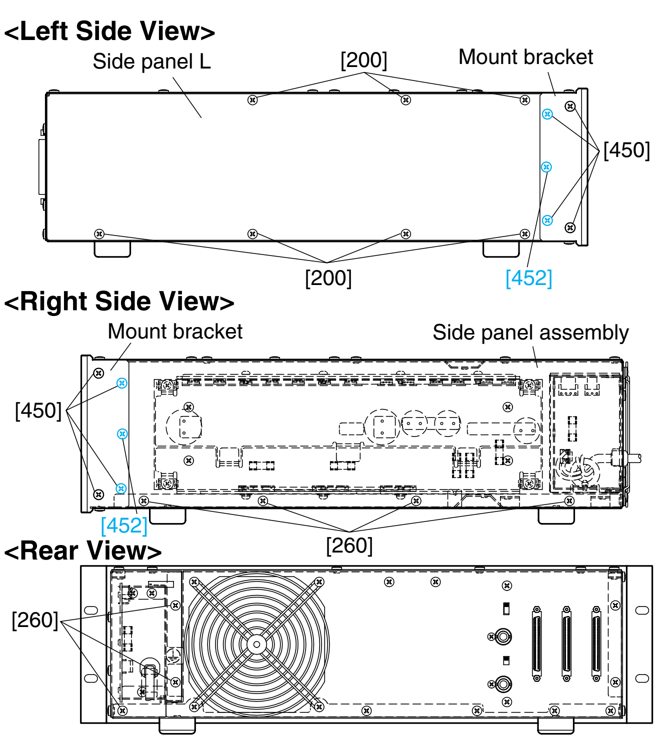
9-8 Remove the seven (7) screws marked [260]. The side panel assembly can then be removed. (Fig. 5)

• Mother Assembly



[30]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)
[50]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)
[70]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)

Fig. 4



[200]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[260]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)
[450]: Oval Head Screw 4.0x8 MFZN2BL (VS153600)
[452]: Oval Head Screw B4.0x10 MFZN2BL (V6221000)

Fig. 5

10. AC Assembly

10-1 Remove the side panel assembly. (See Procedure 9.)

10-2 Remove the three (3) screws marked [90]. The AC assembly can then be removed. (Fig. 6)

11. DC Assembly

11-1 Remove the side panel assembly. (See Procedure 9.)

11-2 Remove the four (4) screws marked [60]. The DC assembly can then be removed. (Fig. 6)

12. DC Circuit Board

12-1 Remove the side panel assembly. (See Procedure 9.)

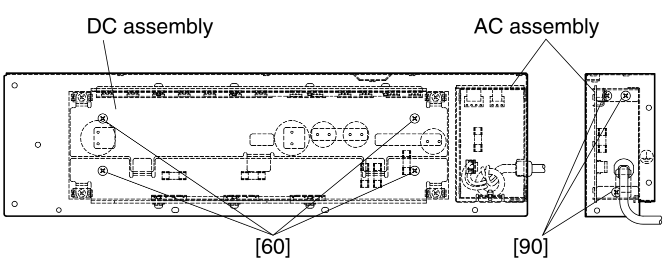
12-2 Remove the DC assembly. (See Procedure 11.)

12-3 Remove the four (4) screws marked [D60]. The TR holder can then be removed. (Fig. 7)

12-4 Remove the three (3) screws marked [D80]. The BR holder can then be removed. (Fig. 7)

12-5 Remove the five (5) screws marked [D90]. The DC cricuit board can then be removed. (Fig. 7)

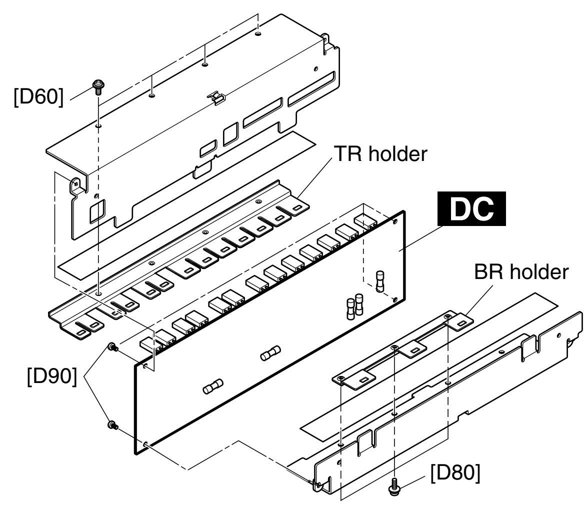
• Side Panel Assembly



[60]: Bind Head Screw A4.0x6 MFZN2BL (EG340290)
[90]: Bind Head Tapping Screw-B A4.0x8 MFZN2BL (VC688800)

Fig. 6

• DC Assembly



[D60]: Pan Head Screw SP4.0x8 MFZN2Y (EL200020)
[D80]: Pan Head Screw SP4.0x8 MFZN2Y (EL200020)
[D90]: Bind Head Tapping Screw-B 3.0x6 MFZN2BL (EP600230)

Fig. 7

■ LSI PIN DESCRIPTION

● **YSS904-F** (XV989A00) **DSP5** (Digital Signal Processor)

IFC2: IC601

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	NC			105	NC		
2	NC		Not used	106	NC		Not used
3	NC			107	NC		
4	NC			108	NC		
5	Vdd		Ground	109	SIO28	I/O	
6	Vss	I	Power supply	110	SIO29	I/O	Serial data bus
7	XI	O	System master clock input (60 MHz or 30 MHz)	111	SIO30	I/O	
8	XO	O	System master clock output (High or 30 MHz)	112	SIO31	I/O	
9	Vdd		Ground	113	Vss		Power supply
10	/SYNCI	I	Sync. signal input	114	Vdd		Ground
11	/SYNCO	O	Sync. signal output	115	SIO32	I/O	
12	Vdd		Ground	116	SIO33	I/O	
13	CKI	I	System clock input (30 MHz)	117	SIO34	I/O	
14	CKO	O	System clock output (30 MHz)	118	SIO35	I/O	Serial data bus
15	CKSEL	I	System master clock select	119	SIO36	I/O	
16	Vss		Power supply	120	SIO37	I/O	
17	MCKD	I	Serial clock input (256 fs)	121	SIO38	I/O	
18	/SSYNC	I	Serial. signal input	122	SIO39	I/O	
19	/IC	I	Initial clear	123	Vss		Power supply
20	/TEST	I	Test mode setting (0: TEST, 1: Normal)	124	Vdd		Ground
21	NC			125	SIO40	I/O	
22	NC		Not used	126	SIO41	I/O	
23	NC			127	SIO42	I/O	
24	Vdd		Ground	128	SIO43	I/O	Serial data bus
25	Vss		Power supply	129	SIO44	I/O	
26	/CS	I	Chip select	130	SIO45	I/O	
27	/WR	I	Write enable input	131	SIO46	I/O	
28	/RD	I	Read enable input	132	SIO47	I/O	
29	CA7	I		133	Vss		Power supply
30	CA6	I		134	SIO48	I/O	
31	CA5	I		135	SIO49	I/O	
32	CA4	I	CPU address bus	136	SIO50	I/O	
33	CA3	I		137	SIO51	I/O	Serial data bus
34	CA2	I		138	SIO52	I/O	
35	CA1	I		139	SIO53	I/O	
36	Vss		Power supply	140	SIO54	I/O	
37	Vdd		Ground	141	SIO55	I/O	
38	CD15	I/O		142	Vss		Power supply
39	CD14	I/O		143	Vdd		Ground
40	CD13	I/O		144	Vdd		
41	CD12	I/O		145	SIO56	I/O	
42	CD11	I/O	CPU data bus	146	SIO57	I/O	
43	CD10	I/O		147	SIO58	I/O	
44	CD09	I/O		148	SIO59	I/O	Serial data bus
45	CD08	I/O		149	SIO60	I/O	
46	CD07	I/O		150	SIO61	I/O	
47	CD06	I/O		151	SIO62	I/O	
48	Vss		Power supply	152	SIO63	I/O	
49	NC			153	NC		
50	NC			154	NC		
51	NC			155	NC		
52	NC		Not used	156	NC		Not used
53	NC			157	NC		
54	NC			158	NC		
55	NC			159	NC		
56	NC			160	NC		
57	Vdd		Ground	161	Vss		Power supply
58	Vdd			162	/POE	I	Parallel data bus controll signal
59	CD05	I/O		163	Vss		Power supply
60	CD04	I/O		164	PIO00	I/O	
61	CD03	I/O	CPU data bus	165	PIO01	I/O	
62	CD02	I/O		166	PIO02	I/O	
63	CD01	I/O		167	PIO03	I/O	Parallel data bus
64	CD00	I/O		168	PIO04	I/O	
65	/WAIT	O	Wait output	169	PIO05	I/O	
66	Vss		Power supply	170	PIO06	I/O	
67	SIO00	I/O		171	PIO07	I/O	
68	SIO01	I/O		172	Vss		Power supply
69	SIO02	I/O		173	Vdd		Ground
70	SIO03	I/O	Serial data bus	174	Vdd		
71	SIO04	I/O		175	PIO08	I/O	
72	SIO05	I/O		176	PIO09	I/O	
73	SIO06	I/O		177	PIO10	I/O	
74	SIO07	I/O		178	PIO11	I/O	Parallel data bus
75	Vss		Power supply	179	PIO12	I/O	
76	Vdd		Ground	180	PIO13	I/O	
77	SIO08	I/O		181	PIO14	I/O	
78	SIO09	I/O		182	PIO15	I/O	
79	SIO10	I/O		183	Vss		Power supply
80	SIO11	I/O	Serial data bus	184	NC		Not used
81	SIO12	I/O		185	PIO16	I/O	
82	SIO13	I/O		186	PIO17	I/O	
83	SIO14	I/O		187	PIO18	I/O	
84	SIO15	I/O		188	PIO19	I/O	Parallel data bus
85	Vss		Power supply	189	PIO20	I/O	
86	Vdd		Ground	190	PIO21	I/O	
87	SIO16	I/O		191	PIO22	I/O	
88	SIO17	I/O		192	PIO23	I/O	
89	SIO18	I/O		193	Vss		Power supply
90	SIO19	I/O	Serial data bus	194	Vdd		Ground
91	SIO20	I/O		195	Vdd		
92	SIO21	I/O		196	PIO24	I/O	
93	SIO22	I/O		197	PIO25	I/O	
94	SIO23	I/O		198	PIO26	I/O	
95	Vss		Power supply	199	PIO27	I/O	Parallel data bus
96	Vdd		Ground	200	PIO28	I/O	
97	SIO24	I/O		201	PIO29	I/O	
98	SIO25	I/O	Serial data bus	202	PIO30	I/O	
99	SIO26	I/O		203	PIO31	I/O	
100	SIO27	I/O		204	Vss		Power supply
101	NC			205	NC		
102	NC		Not used	206	NC		Not used
103	NC			207	NC		
104	NC			208	NC		

● HD6477042AF28 (XY715A00) CPU

UNC: IC101

PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	PE14	O	Port E	57	D11	I/O	
2	PE15	O	Port E	58	D10	I/O	Data bus
3	VSS	I	Ground	59	D9	I/O	
4	A0	O		60	D8	I/O	
5	A1	O		61	VSS	I	Ground
6	A2	O		62	D7	I/O	
7	A3	O		63	D6	I/O	Data bus
8	A4	O		64	D5	I/O	
9	A5	O		65	VCC	I	Power supply
10	A6	O		66	D4	I/O	
11	A7	O		67	D3	I/O	
12	A8	O	Address bus	68	D2	I/O	Data bus
13	A9	O		69	D1	I/O	
14	A10	O		70	D0	I/O	
15	A11	O		71	VSS	I	Ground
16	A12	O		72	XTAL	I	Crystal oscillator
17	A13	O		73	MD3	I	Mode control
18	A14	O		74	EXTAL	I	Crystal oscillator
19	A15	O		75	MD2	I	Mode control
20	A16	O		76	NMI	I	Non-maskable interrupt request
21	VCC	I	Power supply	77	VCC	I	Power supply
22	A17	O	Address bus	78	MD1	I	Mode control
23	VSS	I	Ground	79	MD0	I	Mode control
24	/RAS	O	Row address strobe	80	PLLVCC	I	PLL Power supply
25	/CASL	O	Column address strobe (low)	81	PLLCAP	I	PLL capacitor
26	/CASH	O	Column address strobe (high)	82	PLLVSS	I	PLL Ground
27	VSS	O	Ground	83	PA15 / CK	O	Port A / Clock
28	RDWR / PB5	O	DRAM read/write / Port B	84	/RES	I	Reset
29	A18	O		85	PE0	I	
30	A19	O	Address bus	86	PE1	I	
31	A20	O		87	PE2	I	Port E
32	PB9 /A21	O	Port B / Address bus	88	PE3	I	
33	VSS	I	Ground	89	PE4	I	
34	/RD	O	Read	90	VSS	I	Ground
35	/WDTOVF	O	Watch dog timer overflow	91	AN0 / PF0	I	
36	/WRH	O	High write	92	AN1 / PF1	I	
37	VCC	I	Power supply	93	AN2 / PF2	I	Analog input / Port F
38	/WRL	O	Low write	94	AN3 / PF3	I	
39	VSS	I	Ground	95	AN4 / PF4	I	
40	/CS1	O	Chip select	96	AN5 / PF5	I	
41	/CS0	O	Chip select	97	AVSS	I	Analog ground
42	PA9 / TCLKD	O	Port A / Timer clock	98	AN6 / PF6	I	Analog input / Port F
43	/IRQ2 / TCLKC	I	Interrupt request / Timer clock	99	AN7 / PF7	I	Analog input / Port F
44	/CS3	O	Chip select	100	AVCC	I	Power supply
45	/CS2	O	Chip select	101	VSS	I	Ground
46	/IRQ1	I	Interrupt request	102	PE5	O	Port E
47	TXD	O	Data transmission	103	VCC	I	Power supply
48	RXD	I	Data reception	104	PE6	O	
49	/IRQ0	I	Interrupt request	105	PE7	O	
50	PA1 / TXD0	O	Port A / Data transmission	106	PE8	O	Port E
51	PA0 / RXD0	I	Port A / Data reception	107	PE9	O	
52	D15	I/O		108	PE10	O	
53	D14	I/O	Data bus	109	VSS	I	Ground
54	D13	I/O		110	PE11	O	
55	VSS	I	Ground	111	PE12	O	Port E
56	D12	I/O	Data bus	112	PE13	O	

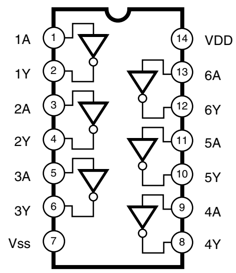
IFC2: IC301, 302, 307, 401, 402, 404, 405

• YM3436DK (XG948E0) DIR2 (Digital Format Interface Receiver)

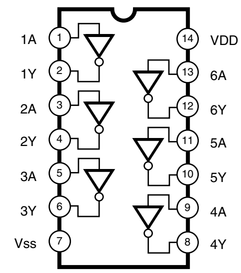
PIN NO.	NAME	I/O	FUNCTION	PIN NO.	NAME	I/O	FUNCTION
1	DAUX	I	Auxiliary input for audio data	23	RSTN	I	System reset input
2	HDLT	O	Asynchronous buffer operation flag	24	Vdda		VCO section power (+5V)
3	DOUT	O	Audio data output	25	CTLN	I	VCO control input N
4	VFL	O	Parity flag output	26	PCO	O	PLL phase comparison output
5	OPT	O	Fs x 1 Synchronous output signal for DAC	27	(NC)		
6	SYNC	O	Fs x 1 Synchronous output signal for DSP	28	CTLP	I	VCO control input P
7	MCC	O	Fs x 64 Bit clock output	29	Vssa		VCO section power (GND)
8	WC	O	FS x 1 Word clock output	30	TSTN	I	Test terminal. Open for normal use
9	MCB	O	Fs x 128 Bit clock output	31	KM2	I	Clock mode switching input 2
10	MCA	O	Fs x 256 Bit clock output	32	KM0	I	Clock mode switching input 0
11	SKSY	I	Clock synchronization control input	33	FS1	O	Channel status sampling frequency display output 1
12	XI	I	Crystal oscillator connection or external clock input	34	FS0	O	Channel status sampling frequency display output 0
13	XO	O	Crystal oscillator connection	35	CSM	I	Channel status output method selection
14	P256	O	VCO oscillating clock connection	36	EXTW	I	External synchronous auxiliary input word clock
15	LOCK	O	PLL lock flag	37	DDIN	I	EIAJ (AES/EBU) data input
16	Vss		Logic section power (GND)	38	LR	O	PLL word clock output
17	TC	O	PLL time constant switching output	39	Vdd		Logic section power (+5 V)
18	DIM1	I	Data input mode selection	40	ERR	O	Data error flag output
19	DIM0	I	Data input mode selection	41	EMP	O	Channel status emphasis control code output
20	DOM1	I	Data output mode selection	42	CD0	O	3-wire type microcomputer interface data output
21	DOM0	I	Data output mode selection	43	CCK	I	3-wire type microcomputer interface clock input
22	KM1	I	Clock mode switching input 1	44	CLD	I	3-wire type microcomputer interface load input

IC BLOCK DIAGRAM

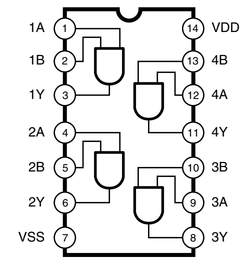
● **HD74LVU04AFPEL** (XY102A00)
Hex Inverter
IFC2: IC106



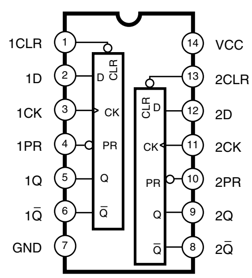
● **HD74LV04AFPEL** (IS000400)
Hex Inverter
IFC2: IC309, 411, 412
UNC: IC105



● **HD74LV08AFPEL** (IS000800)
Quad 2 Input AND
IFC2: IC107, 108, 410
UNC: IC104, 213

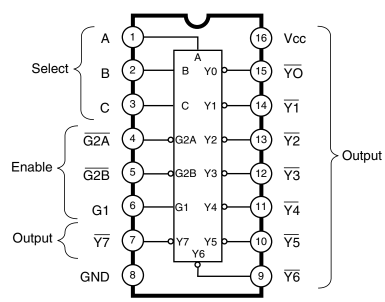


● **TC74VHCT74AF(EL)** (XZ226A00)
Dual D-Type Flip-Flop
IFC2: IC602

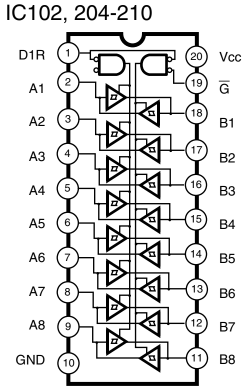


INPUTS				OUTPUTS	
PR	CLR	CLK	D	Q	$\overline{Q}$
L	H	X	X	H	L
H	L	X	X	L	H
L	L	X	X	H	H
H	H	f	H	H	L
H	H	f	L	L	H
H	H	L	X	Q o	Q o

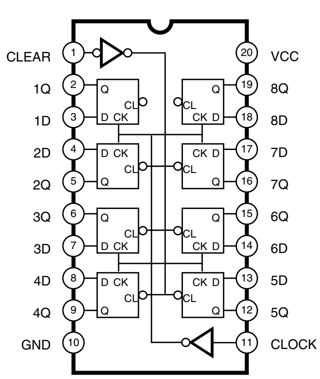
● **SN74LV138ANSR** (IS013810)
3 to 8 Demultiplexer
UNC: IC211, 212



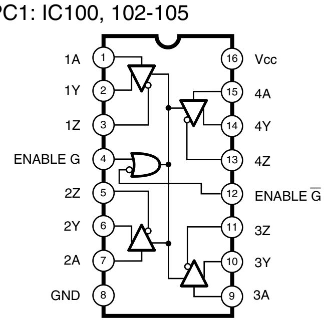
● **TC74VHCT245AF** (XV242A00)
TC74VHC245F (XT487A00)
Octal 3-State Bus Transceiver
IPC1: IC106
IFC2: IC101-105, 501-504, 701-712
UNC: IC102, 204-210



● **HD74LV273AFPEL** (IS027300)
Octal D-Type Flir Flop
IFC2: IC603, 604



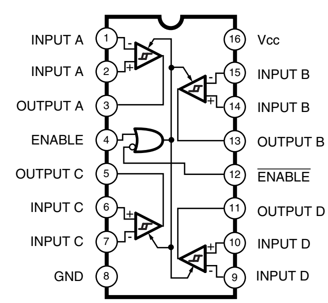
● **AM26LS31CNSR** (XU996A00)
Quad Line Driver
IPC1: IC100, 102-105



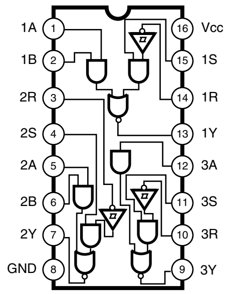
INPUT	ENABLES		OUTPUTS	
A	G	$\overline{G}$	Y	Z
H	H	X	H	L
L	H	X	L	H
H	X	L	H	L
L	X	L	L	H
X	L	H	Z	Z

H= high level X= irrelevant
L= low level Z= high impedance (off)

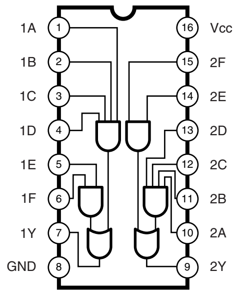
● **DS26C32ATMX** (XU815A00)
Quad Differential Line Receiver
IPC1: IC101



- **SN75124N** (XE737A00)
  Triple Line Receiver
  IPC3: IC300



- **SN75121** (XE638A00)
  Dual Line Driver
  IPC3: IC301

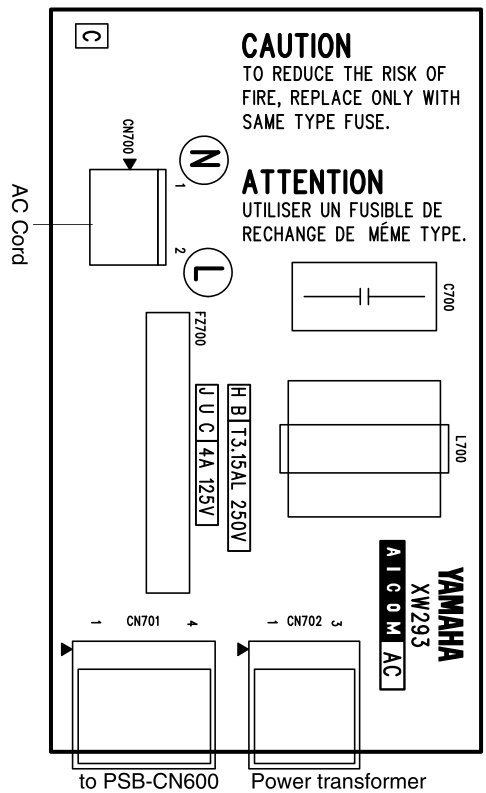


■ CIRCUIT BOARDS CONTENTS

Note: See parts list for details of circuit board component parts.

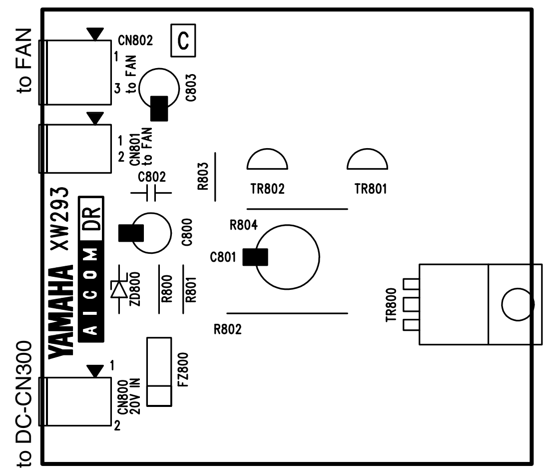
CIRCUIT BOARDS

● AC Circuit Board



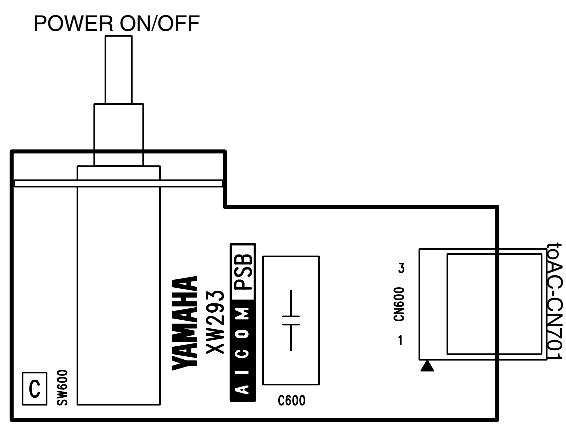
Component side

● DR Circuit Board



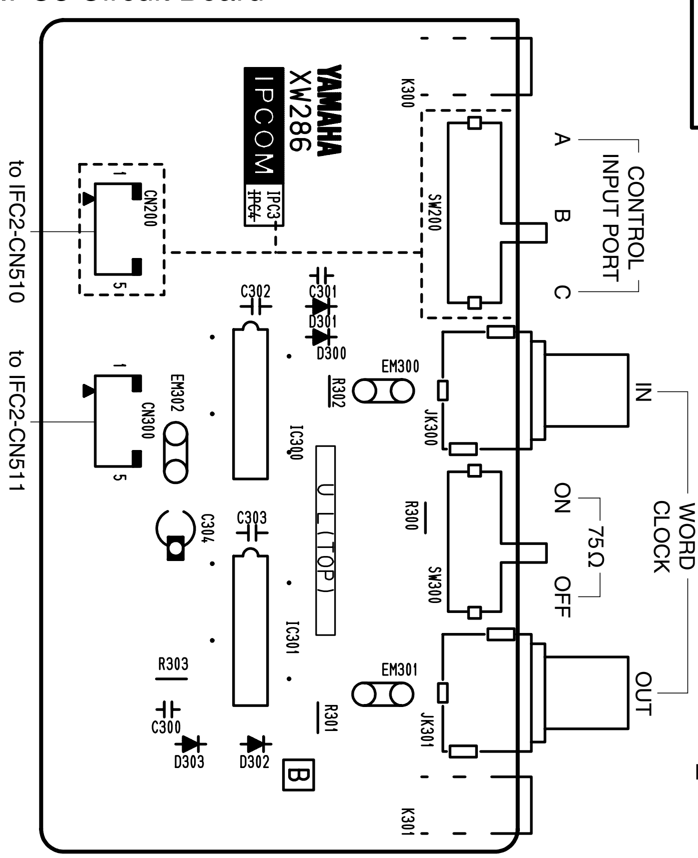
Component side

● PSB Circuit Board



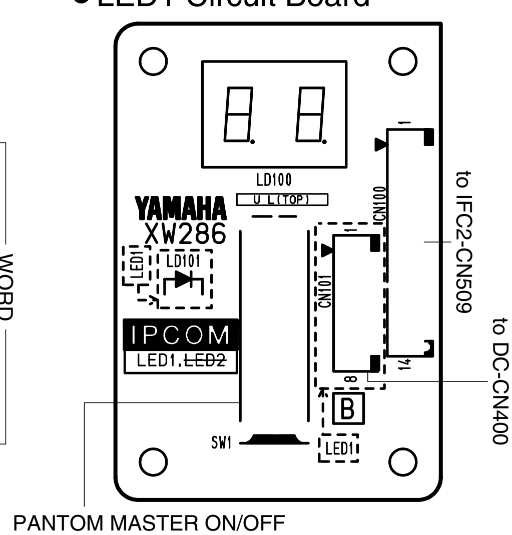
Component side

● IPC3 Circuit Board



Component side

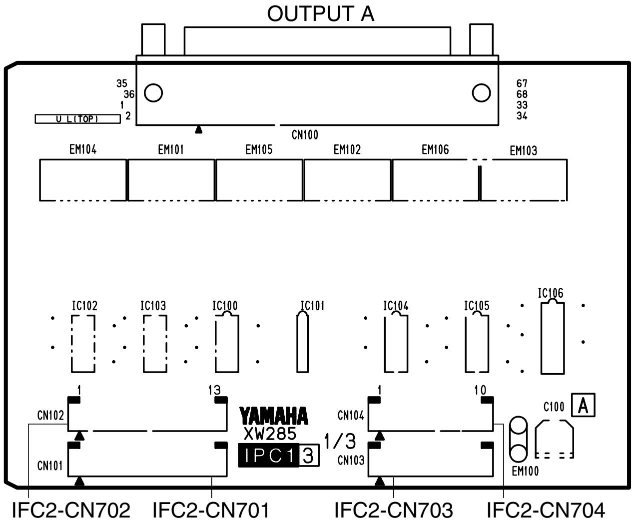
● LED1 Circuit Board



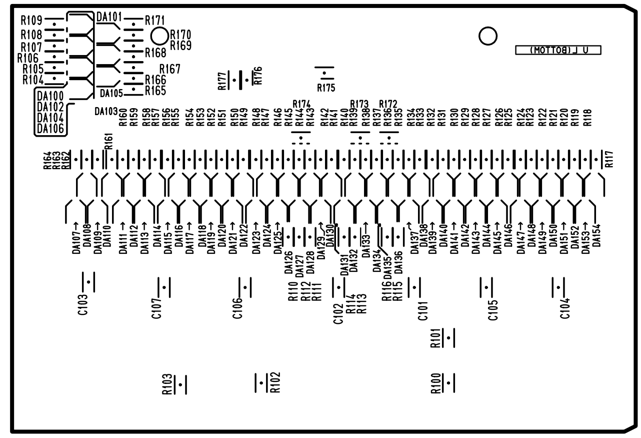
Component side

AC, DR, PSB: 3NA-V412850⚠3
IPC3, LED1: 3NA-V488230⚠1

●IPC1 1/3 Circuit Board

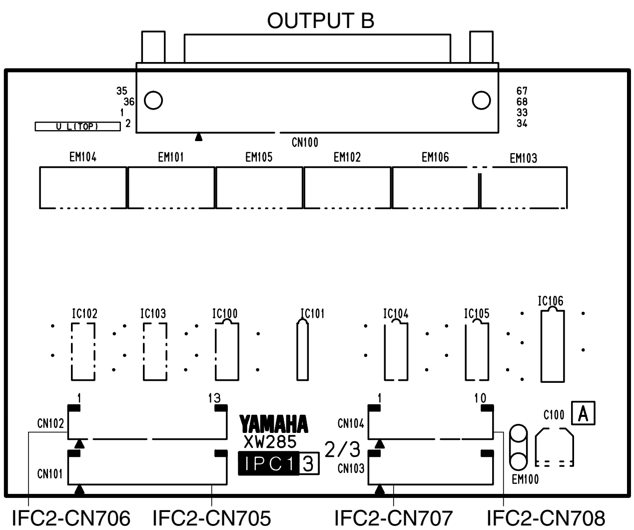


Component side

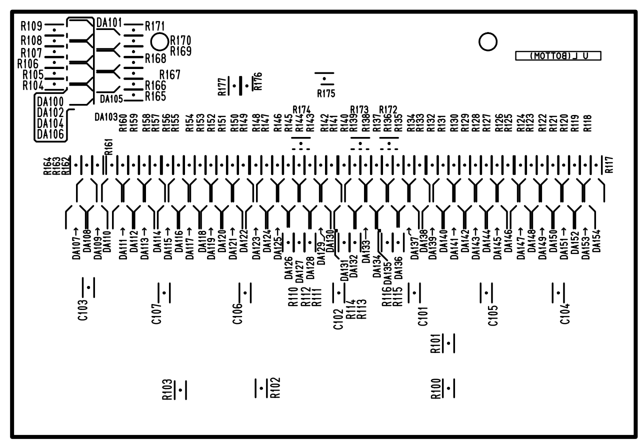


Pattern side

●IPC1 2/3 Circuit Board

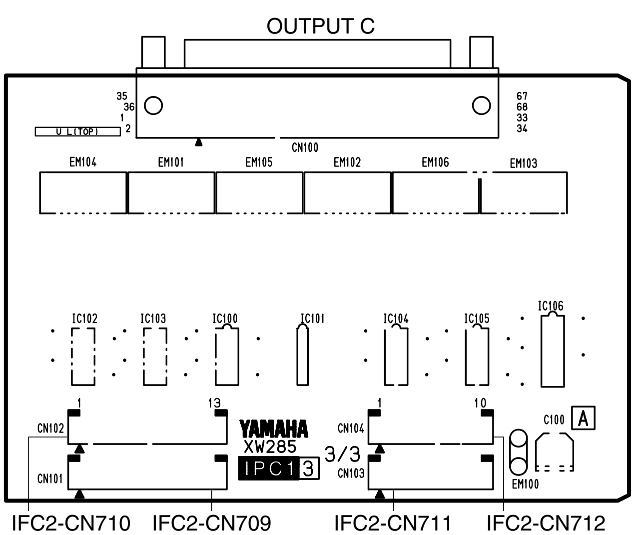


Component side

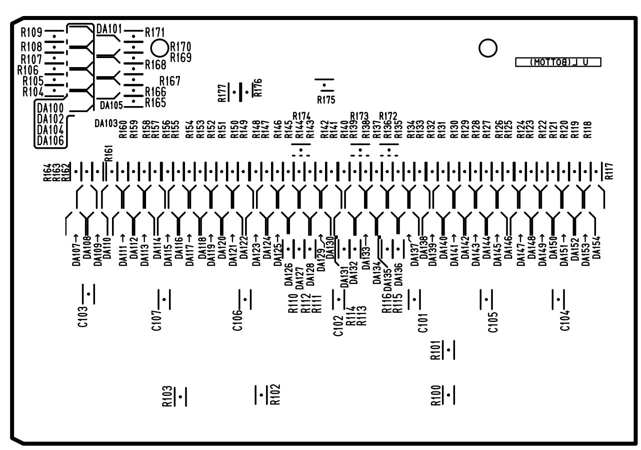


Pattern side

●IPC1 3/3 Circuit Board



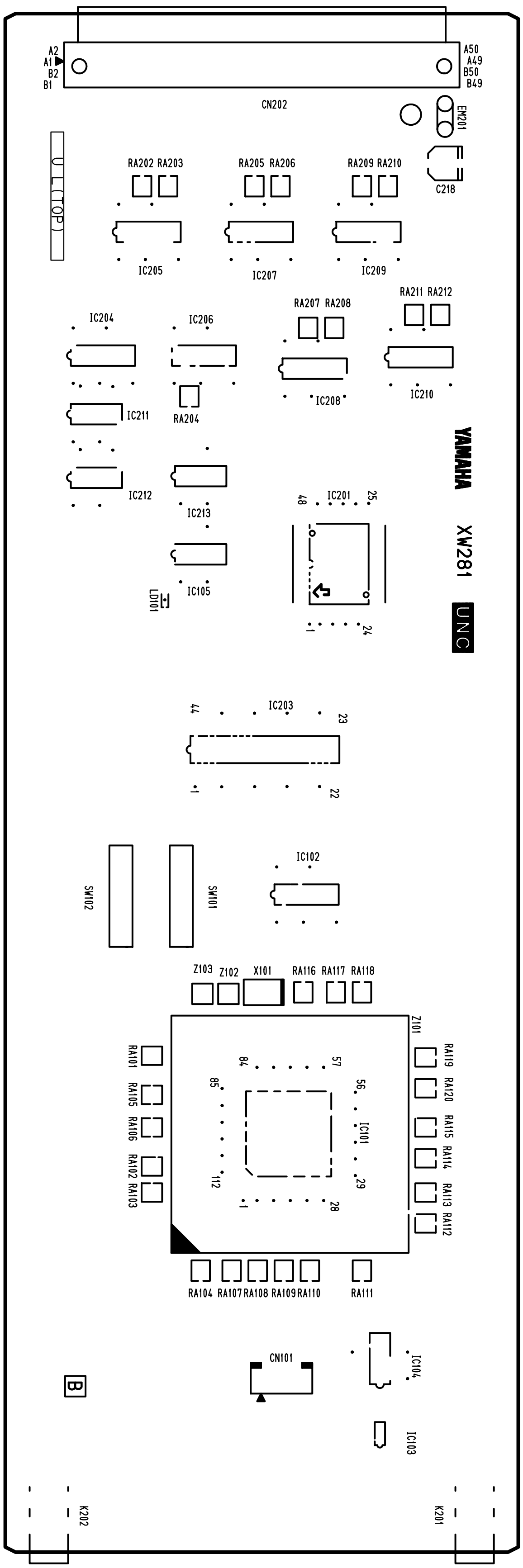
Component side



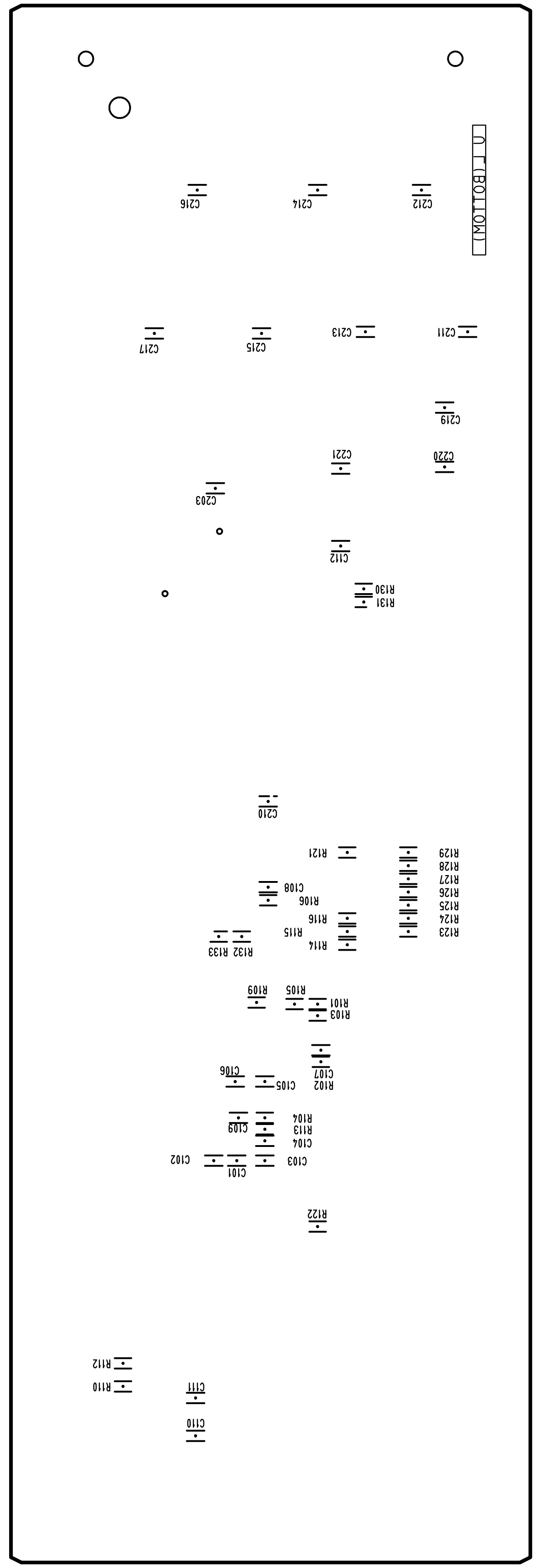
Pattern side

3NA-V488220

● UNC Circuit Board



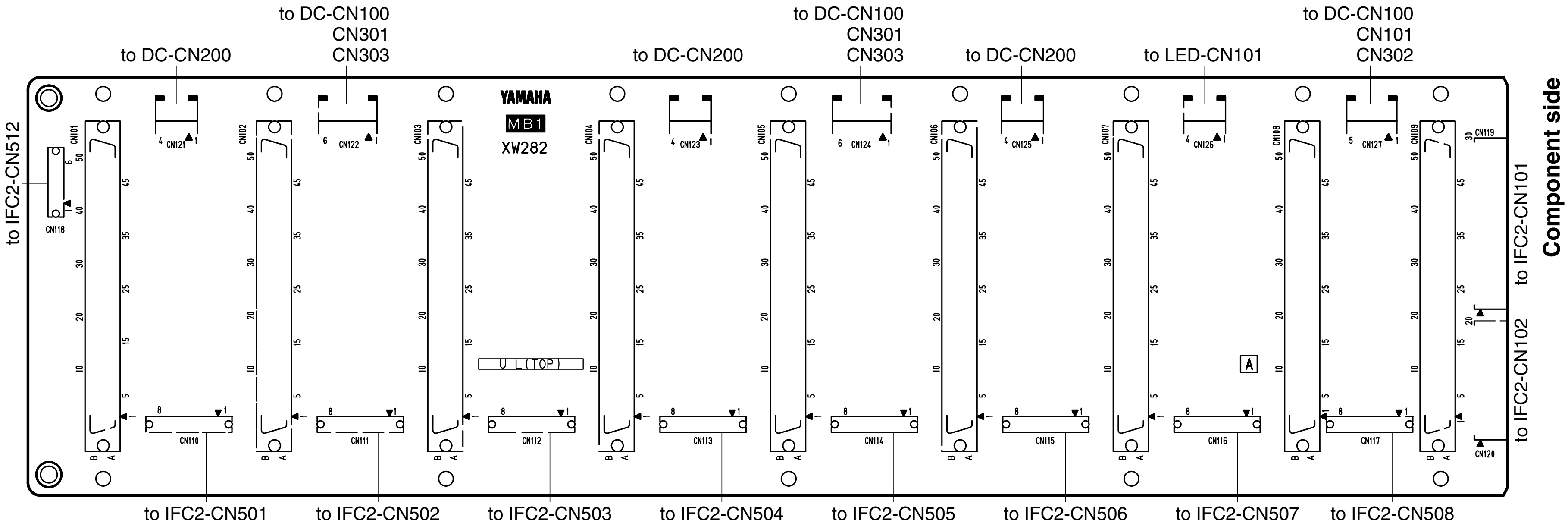
Component side



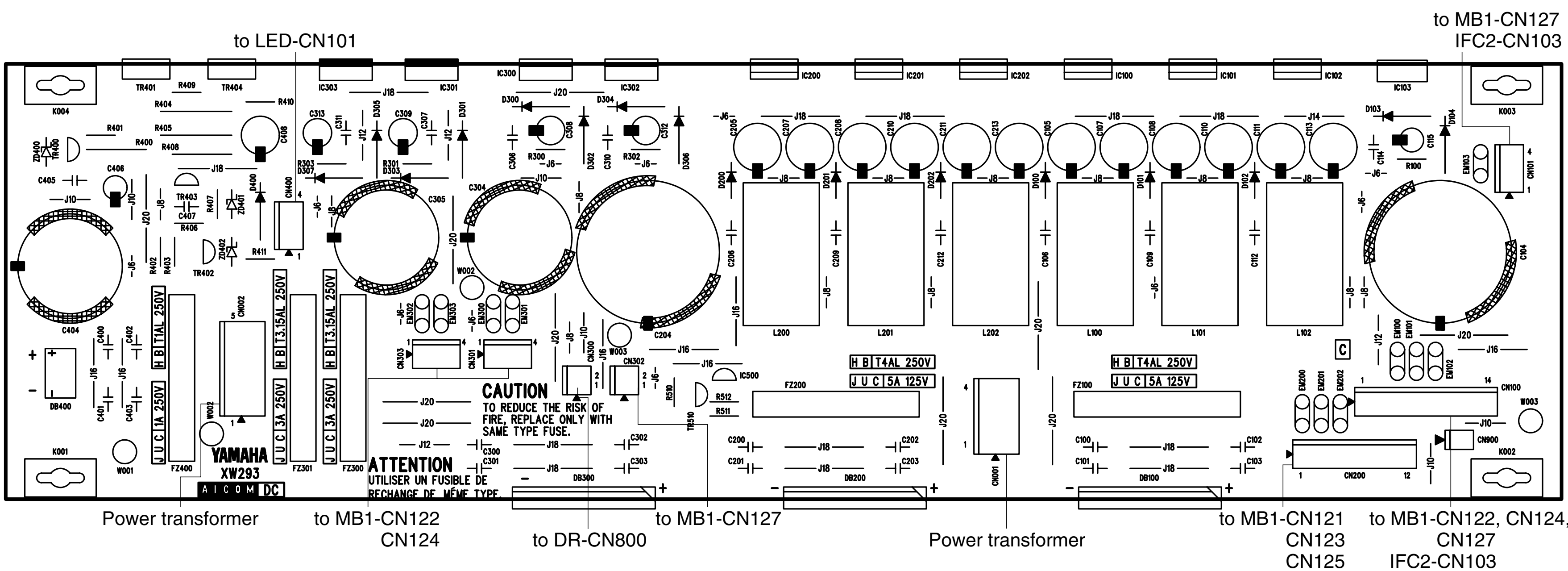
Pattern side

3NA-V412870⚠2

● MB1 Circuit Board



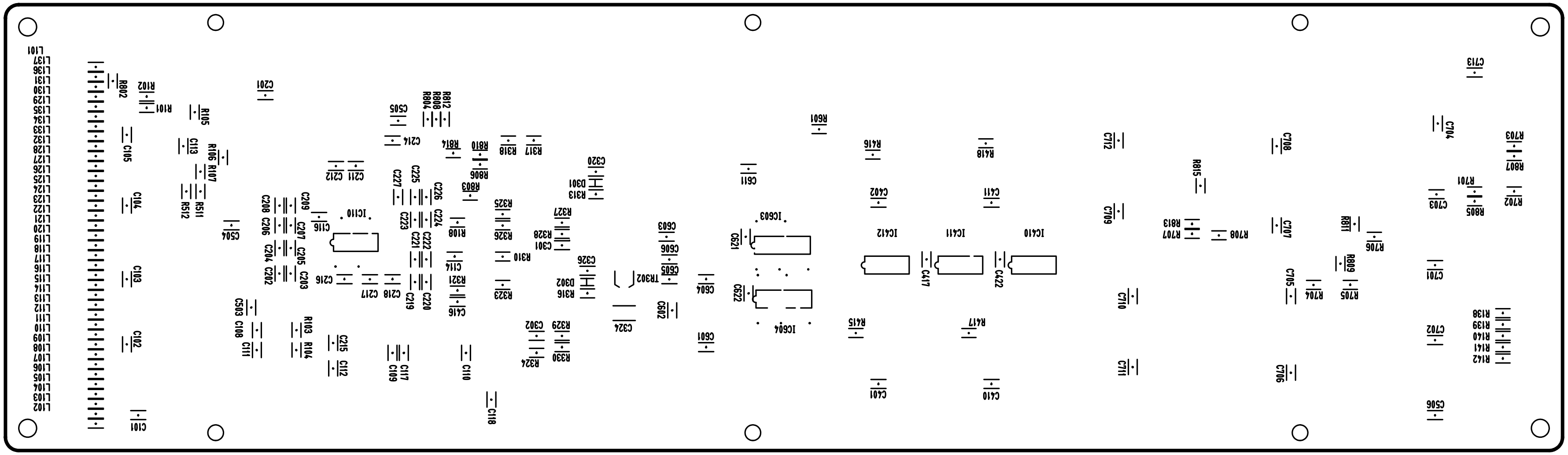
● DC Circuit Board



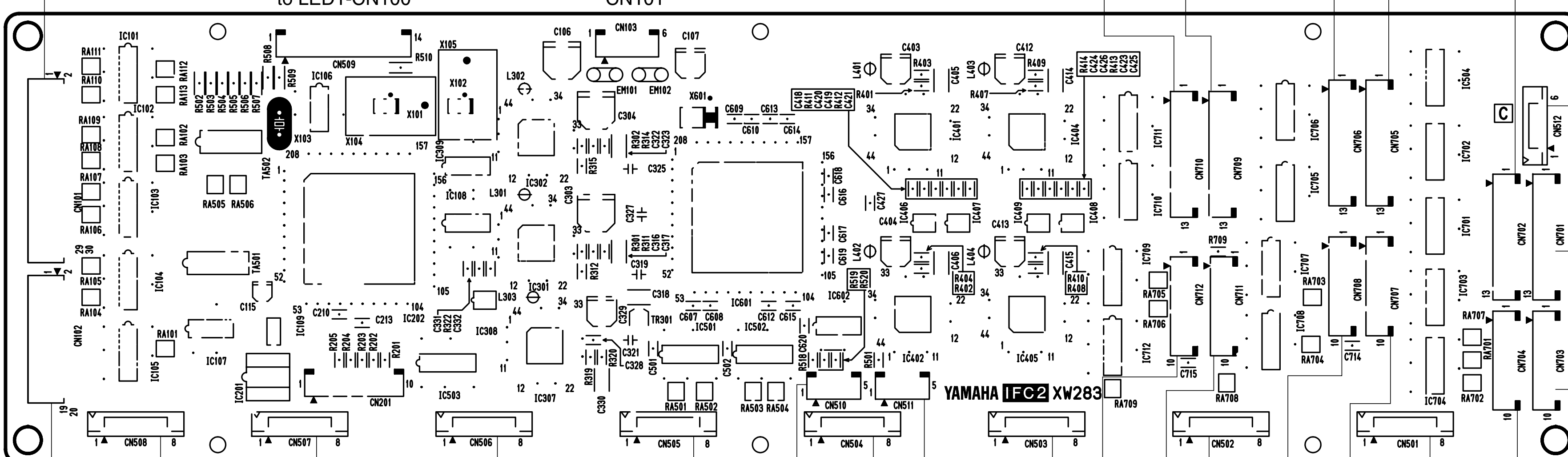
DC: 3NA-V412850
MB1: 3NA-V412880

● IFC2 Circuit Board

Pattern side
3NA-V412890 △3



Component side



■ INSPECTION

1. Range of Applicability

These specifications apply to the AI8, AI8-ML8, AI8-AD8, and AI8-ML4AD4.

2. Preparations

2-1. Conditions

◇ For details on the connection method, refer to the Test Program Specifications KES-92652.
◇ Unless otherwise specified, the conditions are as follows.
· Set the PHANTOM MASTER switch to On.
· Set WORD CLOCK IN 75 Ω to ON.
· Set the CONTROL INPUT PORT to A.

2-2 Loading the Firmware

The firmware used must be the “AI8/AO8 Firmware” (managed with the already drawn CD-R assembly drawing (3JL-XY714A0)) of the PM1D System Software with a version later than the version shown on the cover. For details on the firmware writing method, refer to theTest Program Specifications KES-92652.

2-3. Test Program

For details on the starting method etc., refer to the Test Program Specifications KES-92652.

3. Inspection

3-1. Inspection with Test Program

· Inspect based on the Test Program Specifications KES-92652.

3-2. Jitter Measurement

· Connect the LMY-slot inspection jig Canon terminal to DSA1.
· Set Fs to 48 kHz and 44.1 kHz with the test program and measure the jitter at DSA1.

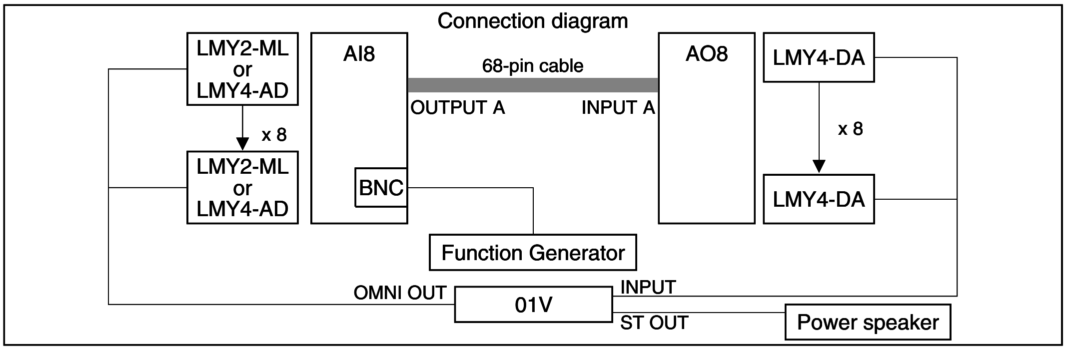
	Range of tolerance
48 kHz	5 nsec max.
44.1 kHz	5 nsec max.

3-3. Fan Operation Check

· Check that the fan rotates while the power is on.

3-4. Sound

· The connections are as in the diagram below.



· Set the AI8 and AO8 sheet UNC DIP switch as below. DIP Switch 8 is not used.

	DIP SW						
	1	2	3	4	5	6	7
AI8	OFF	ON	OFF	OFF	ON	ON	ON
AO8	OFF	OFF	OFF	ON	OFF	OFF	OFF

· For 01V, OSC1kHz is output from OMNI OUT and the signal input to INPUT is assigned to ST OUT.
· For AI8, insert the inspection LMY4-AD cards in Slot 1-8.
· For AI8-ML8, insert the shipping LMY2-ML cards in Slot 1-8.
· For AI8-AD8, insert the shipping LMY4-AD cards in Slot 1-8.
· For AI8-ML4AD4, insert the shipping LMY2-ML cards in Slot 1-4 and the shipping LMY4-AD cards in Slot 5-8.

(1) Fs = 51.12 kHz (48 kHz + 6.5 %)

· Set the function generator to 51.12 kHz.
· Test listen for 30 seconds at all the input terminals and verify that there is no noise.
However, for the LMY2-ML, only the A terminal needs to be checked.

(2) Fs = 39.69 kHz (44.1 kHz -10 %)

· Set the function generator to 39.69 kHz.
· Test listen for 30 seconds at all the input terminals and verify that there is no noise.
However, for the LMY2-ML, only the A terminal needs to be checked.

3-5. Firmware Load Test

Check that it is possible to load the firmware as in 2-2. using the Output C terminal.

4. Factory Settings

· Switch all the sheet UNC DIP switch settings On.

· Front panel

PHANTOM MASTER:	OFF

· Rear panel

WORD CLOCK IN 75 Ω:	On
CONTROL INPUT PORT:	A

■ TEST PROGRAM

A. Preparations for Inspection

•Writing the firmware

This equipment requires firmware. When there are changes to the program for this equipment and during manufacturing processes, it is necessary to download the new firmware to FlashRom from a PC. (If there is no firmware loaded or its checksum does not match the correct value, when the power is first switched on, the LED on UNC flashes at one second intervals.)

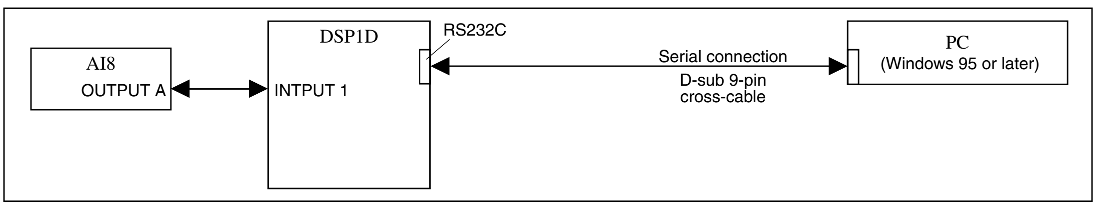
The only sheet for which the firmware must be downloaded is UNC. There are two methods for writing this firmware: to write it indirectly using the CS1D or DSP1D RS232C port or to write it directly to the AI8 UNC sheet. The detailed methods are given below.

•Method for writing firmware using the DSP1D RS232C port

* It is possible to write the AI8 (UNC) firmware from the PC via the CS1D or DSP1D RS232C port. This is the method normally used except for production processes for this equipment.

Software used:	PM1DLOAD within PM1D system software
Firmware used:	AI8/AO8 firmware in PM1D system software
Version used:	PM1DLOAD and the AI8/AO8 firmware are files composed using a PM1D SYSTEM SOFTWARE with a version later than the version shown on the cover. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0).)

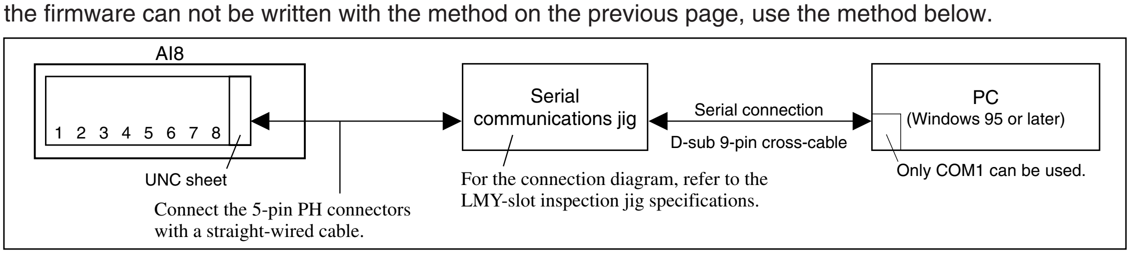
* For the installation and setting methods, refer to the CS1D Test Program Specifications.



1. Install and set the above reference destination files.
2. At the very least, connect as shown in the figure above (when AI8). If it is not possible to avoid making signal connections other than these, turn off the power supply for all components other than those relevant to the write object and turn off the control power supply for the volume of other components such as speakers and amplifiers. Please note that at that time, if other AI8/A08 are connected they may be written and because of this, there is no guaranteed that the writing has been properly performed even if the writing shows a successful completion.
3. Use the methods shown in the CS1D Test Program Specifications to write the firmware to the necessary units.
   After the firmware has been written, check that the versions for all the units are the desired versions.

•Method for writing firmware directly to the AI8 UNC

* When there is some kind of problem or the DSP1D is unavailable due to this equipment's production processes and the firmware can not be written with the method on the previous page, use the method below.



1. Connect the D-sub 9-pin serial cables (cross) and DSP-CHECK board between the 5-pin connector for the target board and the PC. At this time, do not connect other signal lines.
2. After PM1DLOAD starts up, select CardDirect with MODE SELECT, then press OK.
3. Use the setup menu to properly set the serial port to be used and then select AI8/A08 from the pull-down menu.
4. Check on the items for INPUT 1 on the list and click the write button.
5. After writing ends, end PM1DLOAD.
6. Switch off the power for AI8 and remove the PH connector, then switch the power for AI8. DSP1D on again and check that it starts up normally. (Operation is normal if an " E3 " is displayed in 7-segment display for AI8.)

•PM1D inspection PC software preparation

Inspection with this device uses special PC software for inspection.
The software used, version and installation methods as follows

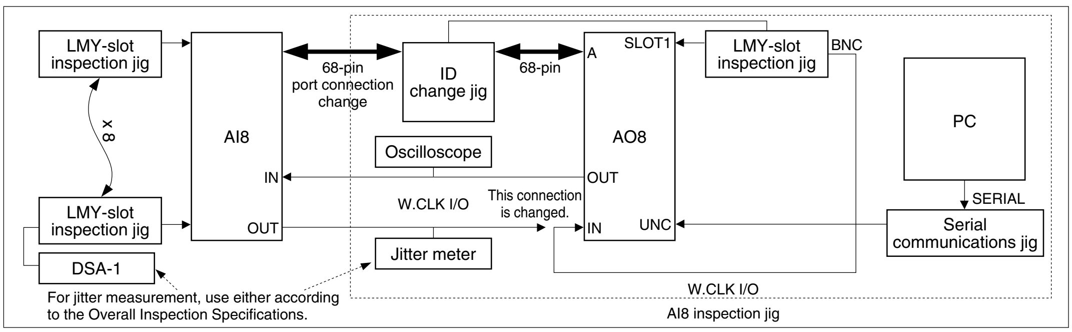
Software used:	PM1D inspection PC software in PM1D system software
Version used:	PM1D system software component files with the version number listed on the cover sheet. (Managed with the already drawn CD-R assembly drawing (3JL-XY714A0).)
Method of preparation:	Follow the instructions in the CS1D test program specifications (Drawing No: KES-92654) titled "Procedure for extracting software groups for production and customer service applications". Once the files have been extracted, refer to the Readme.txt in the FactoryDiag directory.

Before starting inspection, refer to version.txt in the same directory as the firmware shown on the previous page and input the version character string as instructed. (Please refer to page 24, 25)

B. Inspection Method

The inspection configuration is shown in the diagram below.

Install the inspection jig to the AI8 to be inspected as in the figure above. Send the inspection commands from the PC via the AI8 to the LMY-slot inspection jig and take in at the PC the results returned from the LMY-slot inspection jig. Always switch on the Phantom switch before starting the inspection. (The pop-up box is displayed on the PM1D inspection PC software when the checks start.)

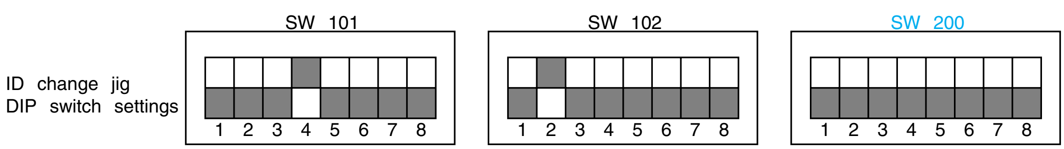


* Turn on the power supply for AO8 before making the connection between the AO8 on the jig side and the jig for serial communication. Warning: Do not connect until "E3" is displayed on the AO8 7-segment display.

* Use the LMY-slot inspection jigs inserted into the LMY-slots. For details, see the LMY-slot inspection jig specifications.

* Serial communications jigs are boards that convert the serial interface from the PC. For details, see the LMY-slot inspection jig specifications.

* Set the DIP switches on the ID change jig for AI8 inspection as shown below. For details on the IC change jig, see the LMY-slot inspection jig specifications.

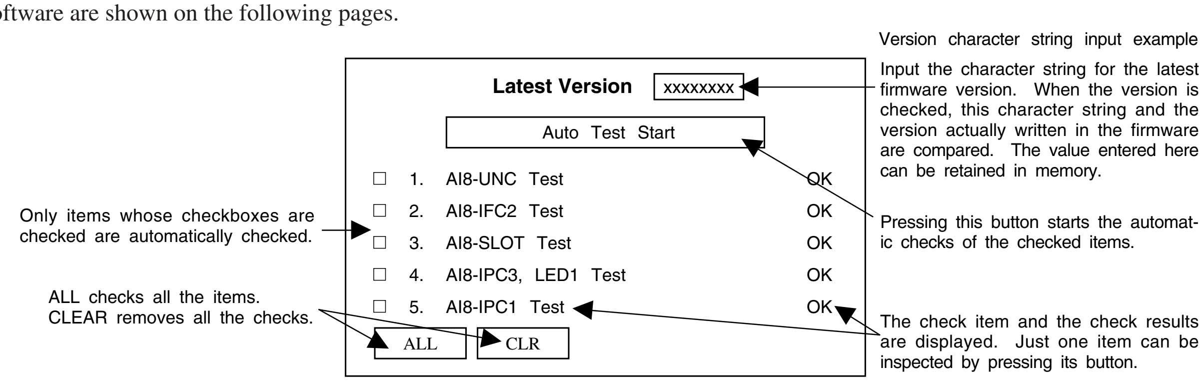


PM1D inspection PC software summary

The AI8 is inspected using PC inspection software. This inspection software is common for AI8/AI8/DSP1D/CS1D. For the basic operation methods, menu screen specifications, etc., see the CS1D Test Program Specifications.

Below is the menu for AI8 inspection.

Input the latest version of AI8 UNC before starting the inspection. (This is necessary for the version check.) For the character string to input, refer to version.txt in the same directory as the AI8/AI8 firmware. Details of each check item and the corresponding PC software are shown on the following pages.



C. Inspection Items

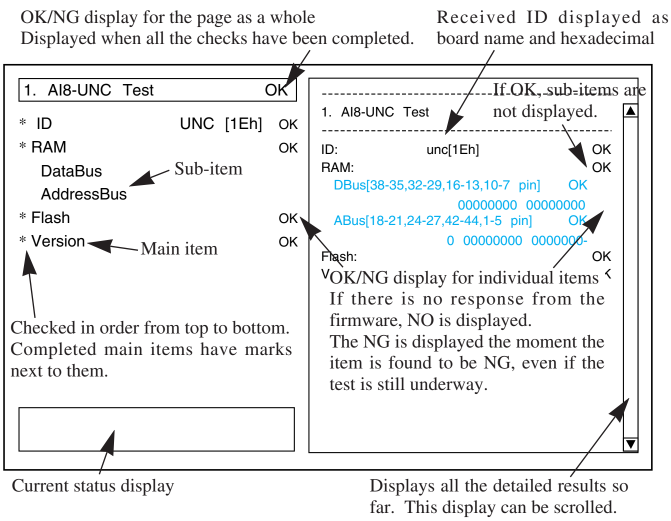
The inspection items are as below. Details of the inspection items are shown on the following pages.

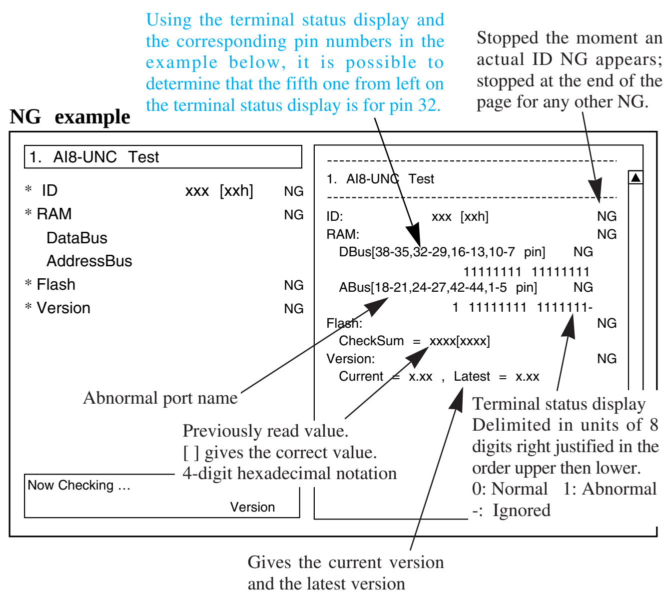
* However, 128 Fs Sync must be normal for the DSP to operate, so there is no special check item.

No.	Item
1	AI8 - UNC test
2	AI8 - IFC2 test
3	AI8 - SLOT test
4	AI8 - IPC3, LED1 test
5	AI8 - IPC1 test

1. AI8 - UNC Test

This test checks around the AI8-UNC.

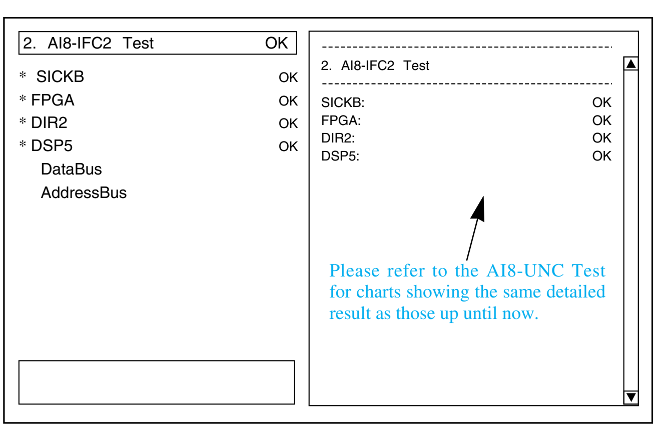




SRAM	OK: LED lit up	
	NG: LED flashes on (0.2 s) - Off (0.2 s) - On (0.2 s) - Off (0.1 s)	
Flash	OK: LED lit up	
	NG: LED flashes on (0.1 s) - Off (0.1 s) - On (0.1 s) - Off (0.1 s)	

2. AI8 - IFC2 Test

This test checks around the AI8-IFC2.



NG sample

Please refer to the AI8-UNC Test for NG charts.

3-1. AI8 - Slot [Initial] Test

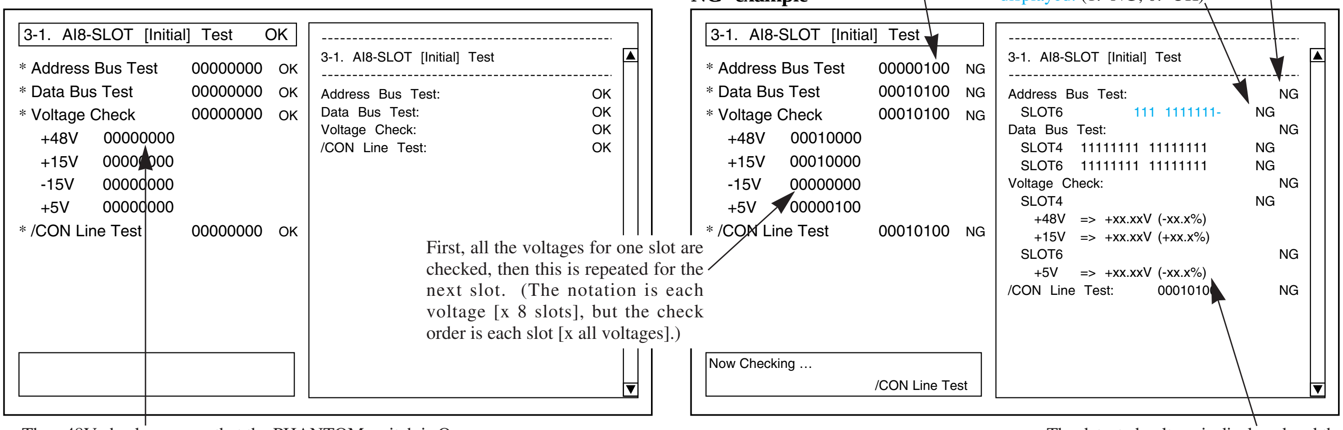
Checks slot operation by checking the minimum necessary number of pins.

The results for each slot are displayed in order from the left. A mark is made for each check to show the progress of the checks.
(Blank: Not yet checked; 0: Normal; 1: Abnormal; N: No response)

Stopped the moment an actual Addr.BusTest or DataBusTest NG appears.

Displays which pin number is NG. The main part of the address bus is displayed. (1: NG; 0: OK)

NG example



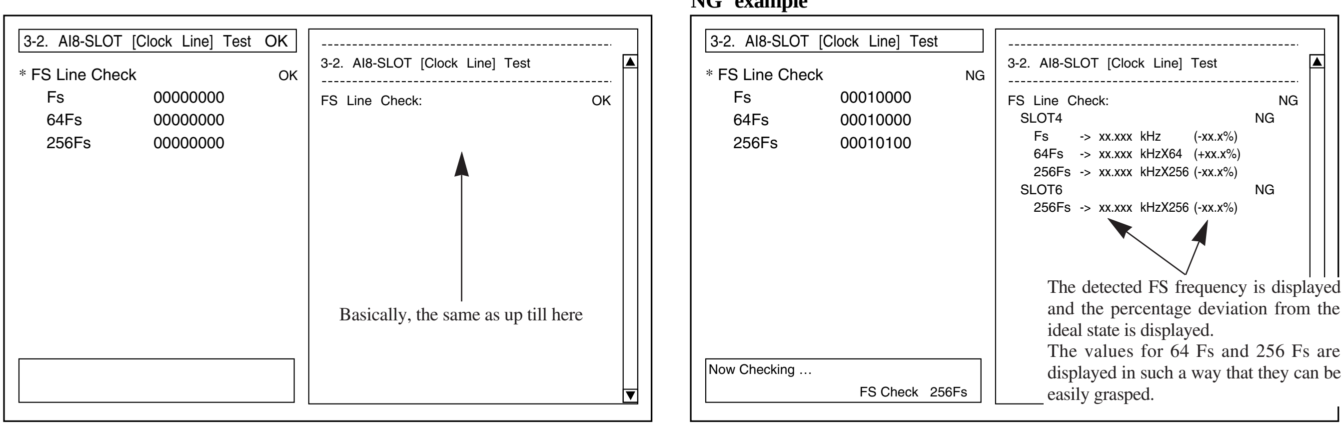
The +48V check assumes that the PHANTOM switch is On.
It must be switched on at the start of the AI8 inspection.

The detected voltage is displayed and the percentage deviation from the ideal state is displayed. This is shown for each slot.

3-2. AI8 - Slot [Clock Line] Test

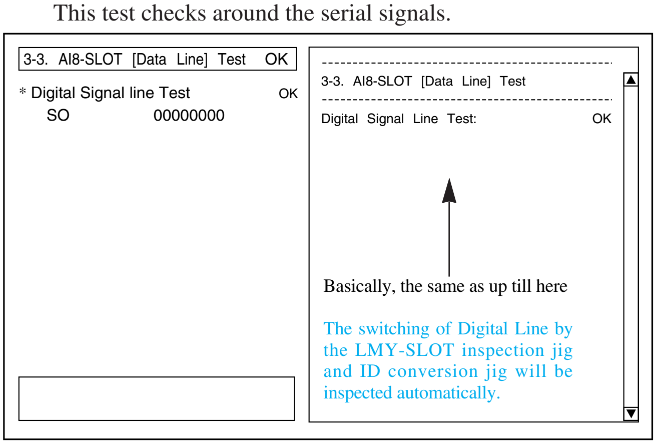
This test checks around the slot clock.

NG example



3-3. AI8 - Slot [Data Line] Test

This test checks around the serial signals.

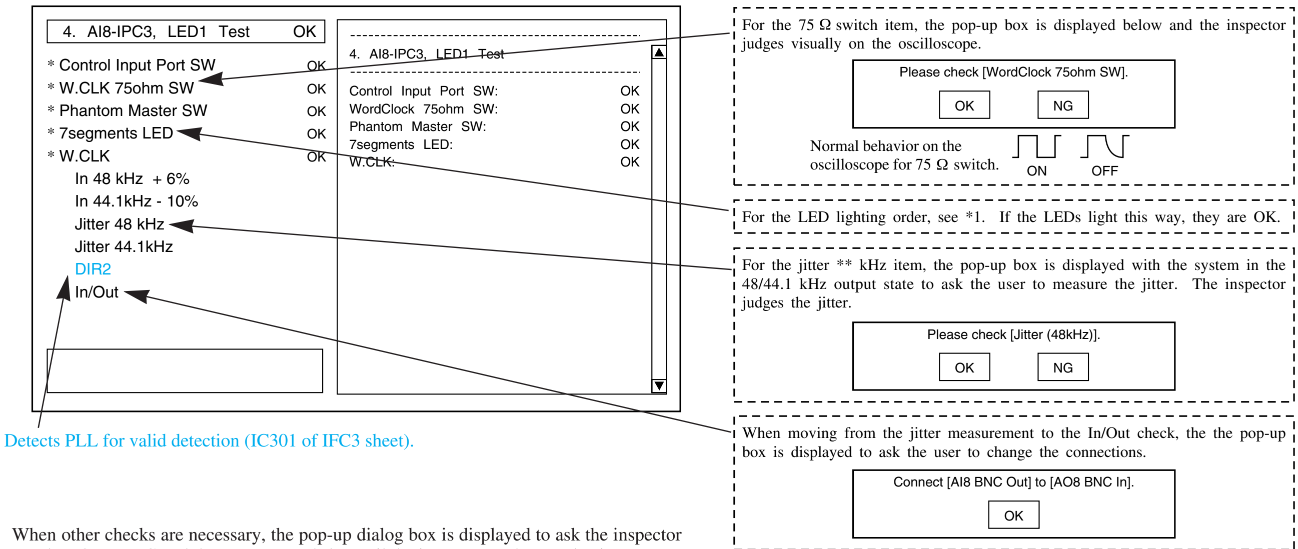


NG sample

Please refer to page 25 for NG charts.

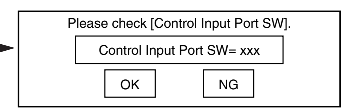
4. AI8 - IPC3, LED1 test

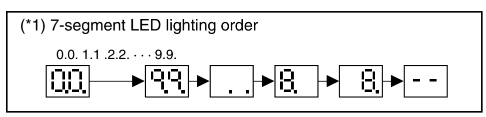
This test checks around the AI8 - IPC3 and LED1.



When other checks are necessary, the pop-up dialog box is displayed to ask the inspector to select OK or NG and the system stands by until the inspector makes a selection.

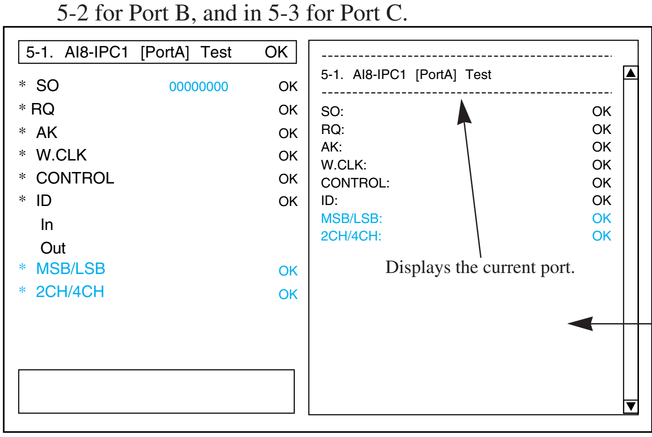
The current switch status is displayed in real time and the inspector looks at the behavior of the system and judges it OK/NG.





5. AI8 - IPC1 test

This test checks around the AI8 - IPC1. Ports A, B, and C are all checked, so the same procedure is carried out in 5-1 for Port A, in 5-2 for Port B, and in 5-3 for Port C.

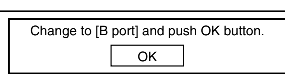


NG sample

Please refer to page 25 for NG charts.

Please refer to page 25 for charts showing the same detailed result as those up until now.

When changing to the next port, a pop-up box like that on the right is displayed. Change the connections and click the OK button.



ERROR MESSAGES

If an error occurs in the connection to the DSP1D, or if the unit does not lock to the wordclock signal, one of the following error indications appears.

ERROR MESSAGE	DESCRIPTION
E 1	The AI8 is connected to the OUTPUT connector of the DSP1D/DSP1D-EX. Connect the AI8 to the INPUT connector.
E 3	A cable is disconnected from the OUTPUT A, B, or C connector on the rear panel, or the connection is made incorrectly. If the connection is proper, replace the cable.
UL	The unit does not lock to the wordclock signal.
UC	The control signal is not being received correctly.
“.x .”	(two dots and the ID number of the OUTPUT connector on the DSP1D/DSP1D-EX) Illuminating or flashing dots mean that the AI8 is connected in Mirror mode from the DSP1D/DSP1D-EX. If “.x .” lights up continuously during Mirror mode operation, the CONTROL PORT switch setting matches the setting controlled from the CS1D and the system is operating normally. If the control signal from the CS1D has changed the setting during Mirror mode operation and it does not match the CONTROL INPUT PORT switch setting any more, this indicator changes in the following order. → “.x.” → “. .” → “_.A.”(or “_.b.”) → “. .” → “ _.A. ” means that the control signal from the CS1D has changed the setting to “A.” “ _.b. ” means that the control signal from the CS1D has changed the setting to “B.” During this time period, you can connect or disconnect the cable from the unselected output connector. If you set the CONTROL PORT switch so that it matches the setting made via the control signal from the CS1D, “.x .” lights up continuously.

ANALOG INPUT BOX

AI8

PARTS LIST

CONTENTS

Notes : DESTINATION ABBREVIATIONS

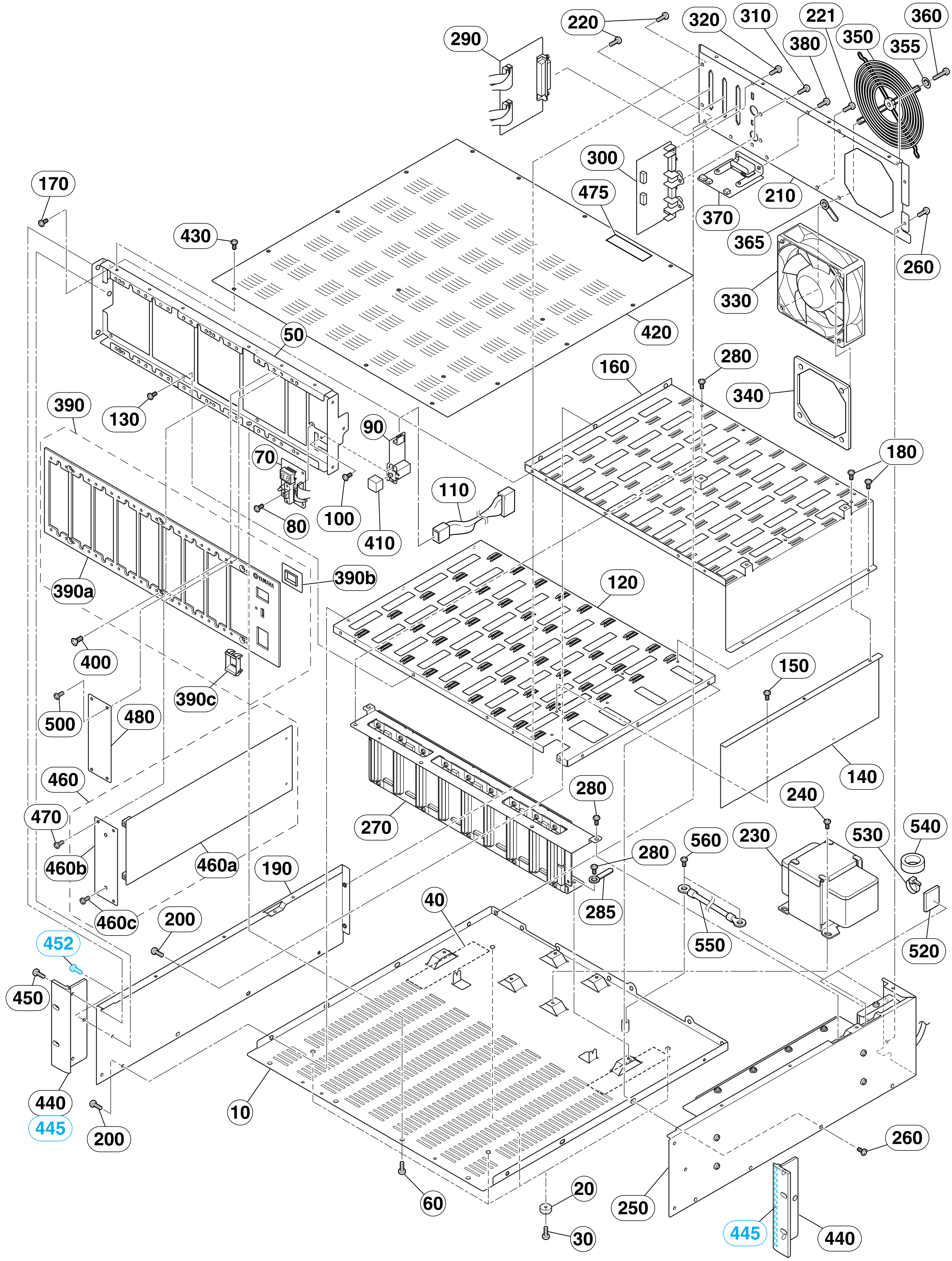
A:	Australian model	M:	South African model
B:	British model	O:	Chinese model
C:	Canadian model	Q:	South-east Asia model
D:	German model	T:	Taiwan model
E:	European model	U:	U.S.A. model
F:	French model	V:	General export model (110 V)
H:	North European model	W:	General export model (220 V)
I :	Indonesian model	N,X:	General export model
J :	Japanese model	Y:	Export model

WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

- The numbers in " QTY " show quantities for each unit.
- The parts with " **- -** " in " **PART NO.** " are not available as spare parts.
- The mark " } " in the remarks column indicates that these parts are interchangeable.
- The second letter of the shaded ( ) part number is O, not zero.
- The second letter of the shaded ( ) part number is I, not one.

OVERALL ASSEMBLY



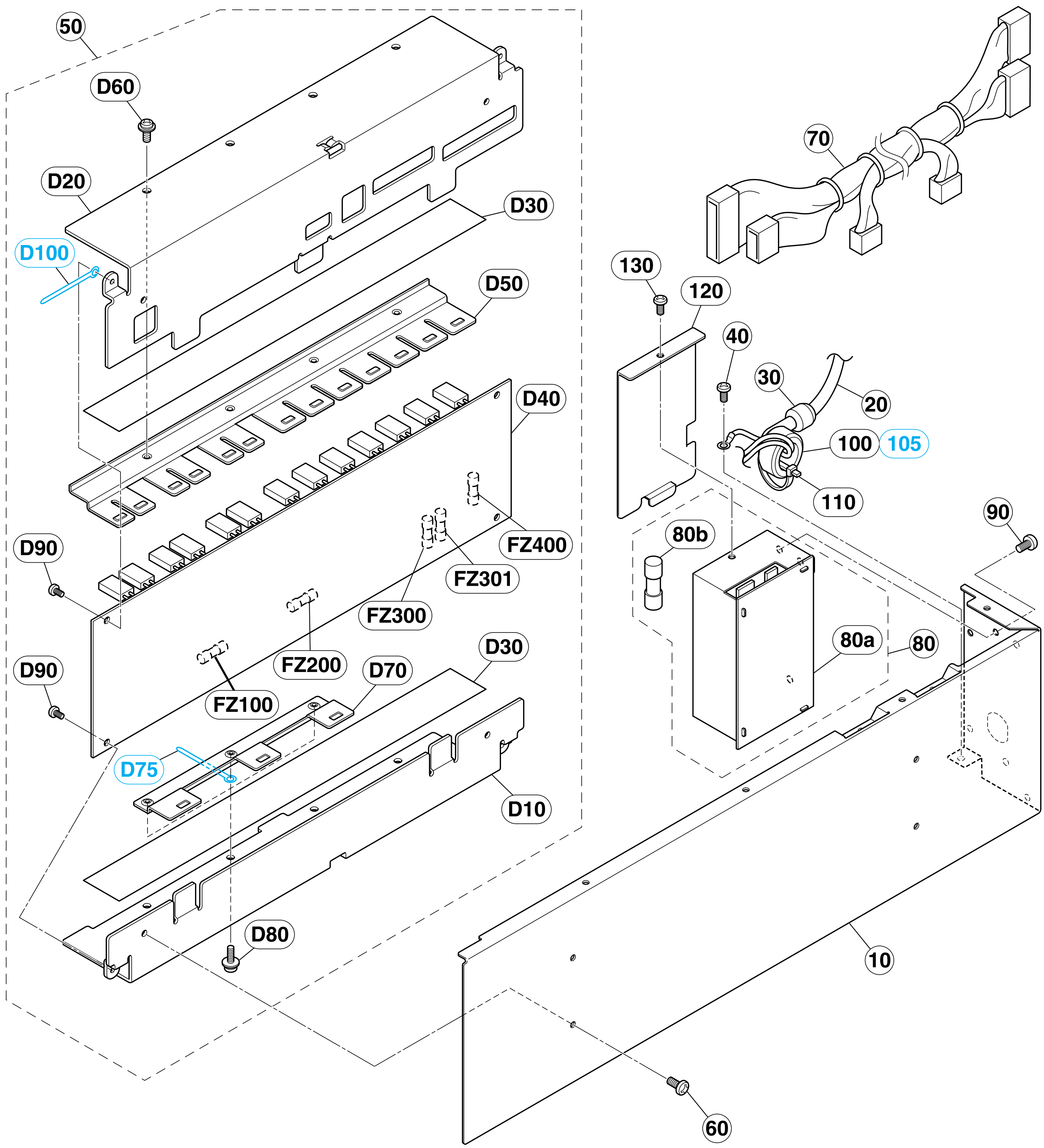
	REF NO.	PART NO.	DESCRIPTION	DESCRIPTION (cont.)	REMARKS	QTY	RANK
			OVERALL ASSEMBLY		AI8		
		- -	Overall Assembly		J (V479510)		
		- -	Overall Assembly		U,V (V479520)		
		- -	Overall Assembly		H,W (V479530)		
		- -	Overall Assembly		B (V479540)		
*	10	V4277100	Bottom Chassis				15
	20	CB806590	Leg	BL		4	03
	30	VR138400	Bind Head Tapping Screw-B	4.0X12 MFZN2BL		4	01
*	40	V4278900	PET Sheet			3	02
*	50	V4277800	Front Shassis				08
	60	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		4	01
*	70	V41295S0	Circuit Board	AI8 LED1 (IPCOM)			
	80	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL		2	01
*	90	V41294S0	Circuit Board	AI8 PSB (AICOM)			
	100	VB659000	Bind Head Screw	3.0X8 MFZN2BL		2	01
	110	- -	Connector Assembly	VH4P-VH3P #18	(V508720)		
*	120	V4277900	Chassis	LOWER			11
	130	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		4	01
*	140	V4914400	Shield				06
	150	VP157900	Bind Head Tapping Screw-B	A3.0X6 MFZN2BL		2	01
*	160	V4278000	Chassis	UPPER			08
	170	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		3	01
	180	VP157900	Bind Head Tapping Screw-B	A3.0X6 MFZN2BL		5	01
*	190	V4277200	Side Panel	LEFT			09
	200	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		7	01
*	210	V4277400	Rear Panel				10
	220	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		6	01
	221	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			01
⚠ *	230	XW258B00	Power Transformer		J		17
⚠ *	230	XW259B00	Power Transformer		U,V		18
⚠ *	230	XW260B00	Power Transformer		H,B,W		17
	240	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		4	01
	250	- -	Side Panel Assembly	RIGHT	J (V479320)		
	250	- -	Side Panel Assembly	RIGHT	U,V (V479330)		
	250	- -	Side Panel Assembly	RIGHT	H,W (V479340)		
	250	- -	Side Panel Assembly	RIGHT	B (V479350)		
	260	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		7	01
	270	- -	Mother Assembly		(V479270)		
	280	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		8	01
	285	CB817510	Cord Binder	S-14B			03
	288	CB069250	Cord Holder	BK-1		2	01
*	290	V41291S0	Circuit Board	AI8 IPC1		3	
*	300	V41292S0	Circuit Board	AI8 IPC3 (IPCOM)			
	310	VS863000	Bonding Screw	3.0X6 MFZN2BL		2	01
	320	EG340290	Bind Head Screw	A4.0X6 MFZN2BL		2	01
*	330	V5789100	Motor	DC KDE1208PTS3-6	Fan		09
*	340	V6444900	Fan Guide				02
*	350	VK949100	Fan Guard	FG-08UL			06
	355	ET800070	Toothed Lock Washer	A4.0 MFZN2BL		4	01
	360	EG340110	Bind Head Screw	4.0X16 MFZN2BL		4	01
	365	CB817510	Cord Binder	S-14B		2	03
*	370	V46485S0	Circuit Board	AI8 DR (AICOM)			
	380	VN413300	Bonding Tapping Screw-B	3.0X8 MFZN2BL		2	01
	390	- -	Front Panel Assembly		(V479180)		
*	390a	V4277700	Front Panel				16
*	390b	V4278800	LED Cover	7 SEG.			05
	390c	VL813000	Escutcheon, Power Switch				03
	400	VA221200	Flat Head Screw	4.0X8 MFZN2BL		6	01
	410	VL812900	Power Switch Knob		POWER ON/OFF		03
*	420	V4278200	Top Panel				13
	430	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL		17	01
*	440	V7447100	Mount Bracket	3U		2	09
*	445	V6676700	Soft Gasket			2	
	450	VS153600	Oval Head Screw	4.0X8 MFZN2BL		6	01
	452	V6221000	Oval Head Screw	B4.0X10 MFZN2BL		2	01
	460	- -	UNC Card Assembly		(V479500)		
*	460a	V41287S0	Circuit Board	AI8 UNC			
*	460b	V4278600	UNC Plate				04
	460c	VS154500	Bonding Screw	4.0X8 MFZN2BL		2	01
	470	VS863000	Bonding Screw	3.0X6 MFZN2BL		4	01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	475	- -	Label, Caution			U (V533510)		
*	480	V4278500	Blank Panel				8	07
	500	VS863000	Bonding Screw	3.0X6 MFZN2BL			32	01
	520	CB835590	Holder	TMS-20			2	01
	530	CB069250	Cord Holder	BK-1			2	01
	540	VC362700	Ferrite Core	FR25/15/12-1400L			2	04
	550	- -	Connector Assembly	Earth #18		(V572480)		
	560	VP156800	Bind Head Screw	A4.0X8 MFZN2BL				01
			ACCESSORIES					
*		V4789400	Cable, SCSI	DHK-HA2-3000				27

SIDE PANEL ASSEMBLY

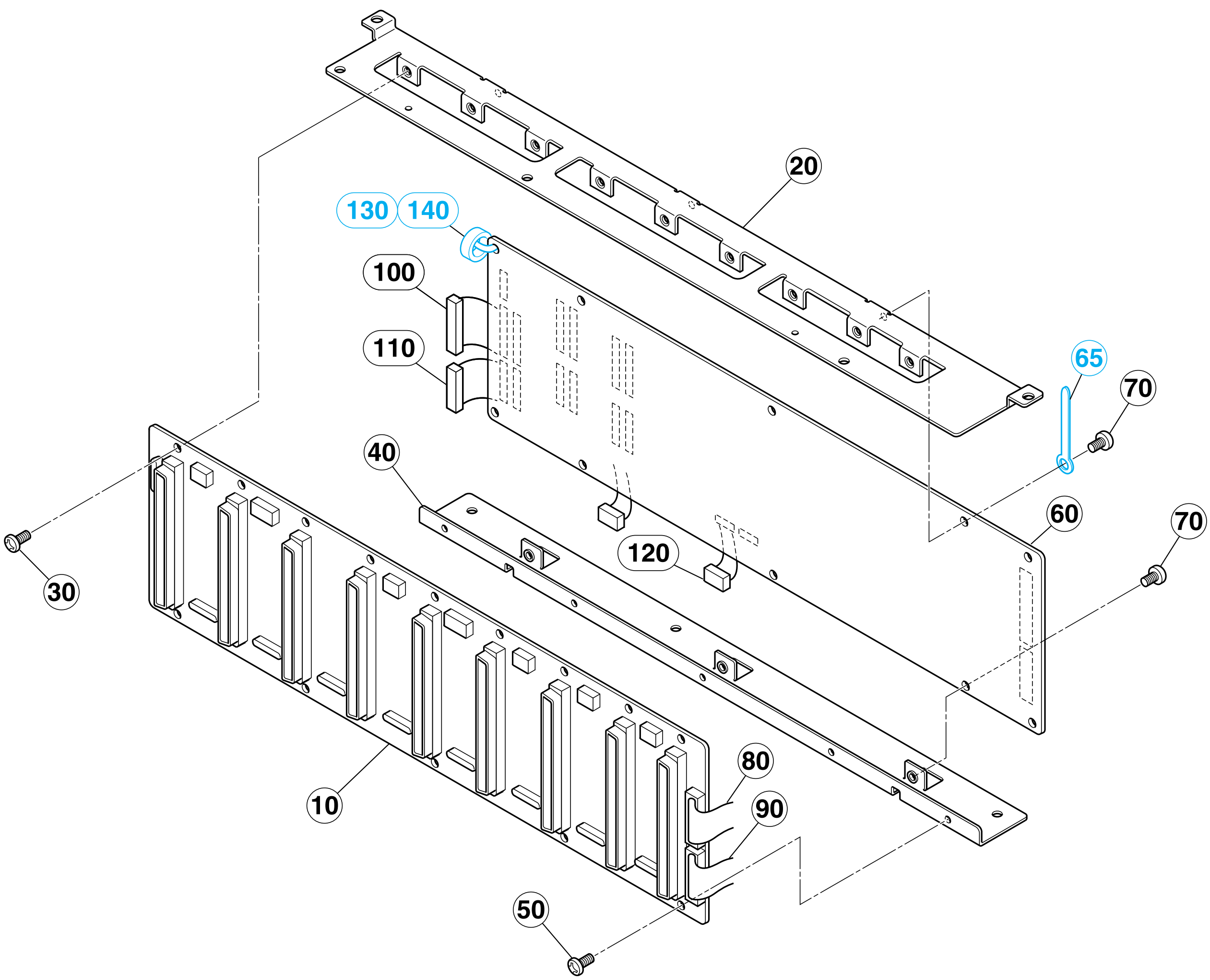


	REF NO.	PART NO.	DESCRIPTION		REMARKS		QTY	RANK
			SIDE PANEL ASSEMBLY	RIGHT	AI8			
		- -	Side Panel Assembly	RIGHT	J	(V479320)		
		- -	Side Panel Assembly	RIGHT	U,V	(V479330)		
		- -	Side Panel Assembly	RIGHT	H,W	(V479340)		
		- -	Side Panel Assembly	RIGHT	B	(V479350)		
*	10	V5074900	Side Panel	RIGHT	J			12
*	10	V5075000	Side Panel	RIGHT	U,V			12
*	10	V5075100	Side Panel	RIGHT	H,B,W			12
⚠	20	VS228900	AC Cord Assembly	2P 15A	J			09
⚠	20	VS229000	AC Cord Assembly	3P 10A	U,V			10
⚠	20	VS229100	AC Cord Assembly	3P 6A	H,W			10
⚠	20	VS229200	AC Cord Assembly	3P 10A	B			11
	30	CB806850	Cord Strain Relief	SR-6N3-4	J			02
	30	CB811230	Cord Strain Relief	SR-6N-4	U,V			02
	30	CB032840	Cord Strain Relief	SR-5N-4	H,B,W			03
	40	VP156800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL	U,H,B,V,W			01
⚠ *	50	V47941S0	DC Aaaembly		J,U,V			
⚠ *	50	V47942S0	DC Assembly		H,B,W			
	60	EG340290	Bind Head Screw	A4.0X6 MFZN2BL			4	01
*	70	V5099100	Connector Assembly	PH-DC				17
⚠	80	- -	AC Assembly		J,U,V	(V479450)		
⚠	80	- -	AC Assembly		H,B,W	(V479460)		
*	80a	V46482S0	Circuit Board	AI8 AC (AICOM)				
⚠	80b	KB003620	Fuse	4.00A JU	J,U,V			01
⚠	80b	KB003090	Fuse	3.15A S	H,B,W			01
	90	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL			3	01
	100	VC362700	Ferrite Core	FR25/15/12-1400L				04
	105	CB835590	Holder	TMS-20				01
	110	CB069250	Cord Holder	BK-1				01
*	120	V4914300	AC Shield cover					03
	130	VC688800	Bind Head Tapping Screw-B	A4.0X8 MFZN2BL				01
⚠ *		V47941S0	DC Aaaembly		J,U,V			
⚠ *		V47942S0	DC Assembly		H,B,W			
*	D10	V4914800	Heat Sink	DC LOW				07
*	D20	V4914900	Heat Sink	DC UP				07
*	D30	V4276400	Isolation Sheet	DC			2	05
*	D40	V46483S0	Circuit Board	AI8 DC (AICOM)				
*	D50	V4276500	Holder	TR				08
	D60	EL200020	Pan Head Screw	SP 4.0X8 MFZN2Y			4	01
*	D70	V4914500	Holder	BR				03
	D75	CB817510	Cord Binder	S-14B			3	03
	D80	EL200020	Pan Head Screw	SP 4.0X8 MFZN2Y			3	01
	D90	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			4	01
	D100	CB817510	Cord Binder	S-14B				03
	D110	- -	Insulation Sheet			(V558710)		
⚠	FZ100	KB003630	Fuse	5.00A JU	J,U,V			01
⚠	FZ100	KB003100	Fuse	4.00A S	H,B,W			01
⚠	FZ200	KB003630	Fuse	5.00A JU	J,U,V			01
⚠	FZ200	KB003100	Fuse	4.00A S	H,B,W			01
⚠	FZ300	KB003590	Fuse	3.00A JU	J,U,V			01
⚠	FZ300	KB003090	Fuse	3.15A S	H,B,W			01
⚠	FZ301	KB003590	Fuse	3.00A JU	J,U,V			01
⚠	FZ301	KB003090	Fuse	3.15A S	H,B,W			01
⚠	FZ400	KB003530	Fuse	1.00A JU	J,U,V			01
⚠	FZ400	KB003040	Fuse	1.00A S	H,B,W			01

*: New Parts

RANK: Japan only

■ MOTHER ASSEMBLY



	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
		- -	MOTHER ASSEMBLY			AI8 (V479270)		
*	10	V41288S0	Circuit Board	AI8 MB1				
*	20	V4278300	Support Metal	1				09
	30	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			9	01
*	40	V4278100	Support Metal	2				07
	50	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			5	01
*	60	V41289S0	Circuit Board	AI8 IFC2				
	65	CB817510	Cord Binder	S-14B			2	03
	70	EP600230	Bind Head Tapping Screw-B	3.0X6 MFZN2BL			6	01
	80	- -	Cable, FFC	P=1.25-K-20-80		(V508550)		
	90	- -	Cable, FFC	P=1.25-K-30-80		(V508560)		
	100	- -	Connector Assembly	PH&PH 13P 80 #28		(V508800)	6	
	110	- -	Connector Assembly	PH&PH 10P 80 #28		(V508810)	6	
	120	- -	Connector Assembly	PH&PH 5P 200L #28		(VN38360)	2	
	130	VC362700	Ferrite Core	FR25/15/12-1400L				04
	140	CB069250	Cord Holder	BK-1				01

*: New Parts

RANK: Japan only

ELECTRICAL PARTS

	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
			ELECTRICAL PARTS			AI8		
*		V46482S0	Circuit Board	AI8 AC (AICOM)		(XW293C0)		
*		V46483S0	Circuit Board	AI8 DC (AICOM)		(XW293C0)		
*		V46485S0	Circuit Board	AI8 DR (AICOM)		(XW293C0)		
*		V41294S0	Circuit Board	AI8 PSB (AICOM)		(XW293C0)		
*		V41291S0	Circuit Board	AI8 IPC1		(XW285A0)		
*		V41292S0	Circuit Board	AI8 IPC3 (IPCOM)		(XW286B0)		
*		V41295S0	Circuit Board	AI8 LED1 (IPCOM)		(XW286B0)		
*		V41289S0	Circuit Board	AI8 IFC2		(XW283C0)		
*		V41288S0	Circuit Board	AI8 MB1		(XW282A0)		
*		V41287S0	Circuit Board	AI8 UNC		(XW281B0)		
*		V46482S0	Circuit Board	AI8 AC (AICOM)		(XW293C0)		
*		V46483S0	Circuit Board	AI8 DC (AICOM)		(XW293C0)		
*		V46485S0	Circuit Board	AI8 DR (AICOM)		(XW293C0)		
*		V41294S0	Circuit Board	AI8 PSB (AICOM)		(XW293C0)		
		VH610100	Bind Head Screw	3.0X14 MFZN2BL				01
		VR144900	Bonding Tapping Screw-B	3.0X6 MFZN2BL			2	
		VA078900	Jumper Wire	0.55				
*		V4276300	AC Shield Metal					04
*		V4797200	Transistor Holder					07
		VN057300	Heat Sink					08
*		V5101700	Insulation Sheet					01
*	C104	V4908300	Electrolytic Cap.	6800 63.0				05
*	C105	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C107	UR848470	Electrolytic Cap.	470.00 25.0V				01
*	C108	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C110	UR848470	Electrolytic Cap.	470.00 25.0V				01
*	C111	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C113	UR848470	Electrolytic Cap.	470.00 25.0V				01
	C115	UR838100	Electrolytic Cap.	100.00 16.0V				01
*	C204	V4908300	Electrolytic Cap.	6800 63.0				05
*	C205	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C207	UR848470	Electrolytic Cap.	470.00 25.0V				01
*	C208	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C210	UR848470	Electrolytic Cap.	470.00 25.0V				01
*	C211	UR868470	Electrolytic Cap.	470.00 50.0V				01
	C213	UR848470	Electrolytic Cap.	470.00 25.0V				01
	C304	VJ802900	Electrolytic Cap.	3300 35.0V				04
	C305	VJ802900	Electrolytic Cap.	3300 35.0V				04
	C308	UR848100	Electrolytic Cap.	100.00 25.0V				01
	C309	UR848100	Electrolytic Cap.	100.00 25.0V				01
	C312	UR848100	Electrolytic Cap.	100.00 25.0V				01
	C313	UR848100	Electrolytic Cap.	100.00 25.0V				01
*	C404	V4871200	Electrolytic Cap.	1000 100				04
	C406	UR897100	Electrolytic Cap.	10.0 100.0V				01
	C408	UR897470	Electrolytic Cap.	47.0 100.0V				01
	C600	V3311600	Capacitor-KH	0.010 250V J.U.C.S				01
*	C700	V5170300	Capacitor	0.220 275V U.C.S				01
	C800	UR838100	Electrolytic Cap.	100.00 16.0V				01
	C801	UR868100	Electrolytic Cap.	100.00 50.0V				01
	C803	UR838100	Electrolytic Cap.	100.00 16.0V				01
		VS589000	Ceramic Capacitor-E	4700P 500V M				01
		FG644100	Ceramic Capacitor-F	0.0100 50V Z				01
		UA355100	Mylar Capacitor	0.1000 50V J				01
	CN001	LB932040	Base Post Connector	VH 4P TE				01
	CN002	LB932050	Base Post Connector	VH 5P TE				01
	CN100	VE352600	Connector Base Post	PH-14P TE				01
	CN101	VB390000	Connector Base Post	PH 4P TE				01
	CN200	VB390800	Connector Base Post	PH 12P TE				01
	CN300	VB389800	Connector Base Post	PH 2P TE				01
	CN301	VB390000	Connector Base Post	PH 4P TE				01
	CN302	VB389800	Connector Base Post	PH 2P TE				01
	CN303	VB390000	Connector Base Post	PH 4P TE				01
	CN400	VB390000	Connector Base Post	PH 4P TE				01
	CN600	LB933030	Base Post Connector	VH 3P SE				01
	CN700	VG879900	Base Post Connector	VA 2P TE				01
	CN701	LB933040	Base Post Connector	VH 4P SE				01
	CN702	LB933030	Base Post Connector	VH 3P SE				01
	CN800	VB858100	Connector Base Post	PH 2P SE				01

*: New Parts

RANK: Japan only

	REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
	CN802	**VB858200**	Connector Base Post	PH 3P SE			01
	D100	**VP974300**	Diode	D3S6M-4002			03
	-102	**VP974300**	Diode	D3S6M-4002			03
	D103	**VB481900**	Diode	11ES4			01
	D104	**VB481900**	Diode	11ES4			01
	D200	**VP974300**	Diode	D3S6M-4002			03
	-202	**VP974300**	Diode	D3S6M-4002			03
	D300	**VB481900**	Diode	11ES4			01
	-307	**VB481900**	Diode	11ES4			01
	D400	**VB481900**	Diode	11ES4			01
	DB100	**VM621400**	Diode Stack	RBV-1506			05
	DB200	**VM621400**	Diode Stack	RBV-1506			05
	DB300	**VT682400**	Diode Stack	D6SB60L 6.0A 600V			04
	DB400	**VB845300**	Diode Stack	S1WB(A)60 1.0A 60			02
	EM100	**FZ006970**	LC Filter	LS MT Y223NB			02
	-103	**FZ006970**	LC Filter	LS MT Y223NB			02
	EM200	**FZ006970**	LC Filter	LS MT Y223NB			02
	-202	**FZ006970**	LC Filter	LS MT Y223NB			02
	EM300	**FZ006920**	LC Filter	LS MT B271KB			01
	-303	**FZ006920**	LC Filter	LS MT B271KB			01
	FZ100	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ200	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ300	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ301	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ400	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ700	**VP206500**	Fuse Holder	EYF-52BC			01
	FZ800	**VG297000**	IC Protector	ICP-F20			02
	IC100	**XT442A00**	IC	SI-8050S	REGULATOR +5V		05
	-102	**XT442A00**	IC	SI-8050S	REGULATOR +5V		05
*	IC103	**XW196A00**	IC	UPC2933HF	REGULATOR +3.3V		03
	IC200	**XT442A00**	IC	SI-8050S	REGULATOR +5V		05
	-202	**XT442A00**	IC	SI-8050S	REGULATOR +5V		05
	IC300	**XR608A00**	IC	UPC2415AHF	REGULATOR +15V		04
	IC301	**XD854A00**	IC	NJM7915FA	REGULATOR -15V		03
	IC302	**XR608A00**	IC	UPC2415AHF	REGULATOR +15V		04
	IC303	**XD854A00**	IC	NJM7915FA	REGULATOR -15V		03
	IC500	**XD631A00**	IC	PST518B-TP	SYSTEM RESET		02
	K001	**BB069510**	Land Terminal	A-8			01
	-004	**BB069510**	Land Terminal	A-8			01
*	L100	**V2379700**	Coil	HP-033JY 150			06
*	-102	**V2379700**	Coil	HP-033JY 150			06
*	L200	**V2379700**	Coil	HP-033JY 150			06
*	-202	**V2379700**	Coil	HP-033JY 150			06
*	L700	**V4122100**	Line Filter	PLH10A7003R6P02			02
	R400	**VC749400**	Metal Oxide Film Resistor	5.6K 1W J			01
	R404	**VC757100**	Metal Oxide Film Resistor	22.0 2W J			01
	R405	**VC757100**	Metal Oxide Film Resistor	22.0 2W J			01
	R408	**VC750200**	Metal Oxide Film Resistor	12.0K 1W J			01
	R410	**VC330400**	Metal Film Resistor	47.0K 1/4 F			01
	R411	**VC328600**	Metal Film Resistor	8.2K 1/4 F			01
*	R510	**VC327700**	Metal Film Resistor	3.6K 1/4 F			
	R511	**VC327200**	Metal Film Resistor	2.2K 1/4 F			01
	R802	**VC757100**	Metal Oxide Film Resistor	22.0 2W J			01
	R804	**VC740100**	Metal Oxide Film Resistor	1.0 1W J			01
		HF756220	Carbon Resistor	2.2K 1/4 J			01
		HF756330	Carbon Resistor	3.3K 1/4 J			01
		HF756560	Carbon Resistor	5.6K 1/4 J			01
		HF757100	Carbon Resistor	10.0K 1/4 J			01
		HF757220	Carbon Resistor	22.0K 1/4 J			01
		HF758100	Carbon Resistor	100.0K 1/4 J			01
⚠	SW600	**V3127000**	Push Switch	ESB92S23B J.U.C.S	POWER ON/OFF		02
	TR400	**VS150800**	Transistor	2SC2SC3200 GR			01
	TR401	**VM923000**	Transistor	2SD2015			03
	TR402	**VS150800**	Transistor	2SC2SC3200 GR			01
	TR403	**VS150800**	Transistor	2SC2SC3200 GR			01
	TR404	**VM923000**	Transistor	2SD2015			03
	TR510	**IC1815M0**	Transistor	2SC1815 Y-GR			01
	TR800	**IB059600**	Transistor	2SB596LBB O,Y			04
	TR801	**IC1815M0**	Transistor	2SC1815 Y,GR			01
	TR802	**IC1815M0**	Transistor	2SC1815 Y,GR			01

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	REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	ZD400	**VQ554100**	Zener Diode	MTZJ7.5A 7.5V			01
	ZD401	**VQ558500**	Zener Diode	MTZJ33B 33.0V			01
	ZD402	**VQ557800**	Zener Diode	MTZJ27B 27.0V			01
*	ZD800	**VQ554100**	Zener Diode	MTZJ7.5A 7.5V			01
	W0013	- -	GND Wire	L=180	(V744560)		
	W0023	- -	Connector Assembly	L=90	(V746250)		
	W0033	- -	Connector Assembly	L=210	(V746260)		
	W0043	- -	Connector Assembly	SAN&PH2P 690	(V744550)		
*		**V41291S0**	Circuit Board	AI8 IPC1	(XW285A0)		
	C100	**UF038100**	Electrolytic Cap. (chip)	100 16V			01
		UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z			01
*	CN100	**V4158600**	Connector	230R (SCSI) 68P SE	OUTPUT A/B/C		06
	CN101	**VF283100**	Connector Base Post	PH 13P TE			01
	CN102	**VF283100**	Connector Base Post	PH 13P TE			01
	CN103	**VB390600**	Connector Base Post	PH 10P TE			01
	CN104	**VB390600**	Connector Base Post	PH 10P TE			01
	DA100	**VV556300**	Diode Array	DAN217 0.3A X2			01
	-154	**VV556300**	Diode Array	DAN217 0.3A X2			01
	EM100	**FZ006970**	LC Filter	LS MT Y223NB			02
	EM101	**VL534100**	LC Filter	NFA81R00C101			05
	-106	**VL534100**	LC Filter	NFA81R00C101			05
	IC100	**XU996A00**	IC	AM26LS31CNSR	LINE DRIVER		05
	IC101	**XU815A00**	IC	DS26C32ATMX	LINE RECEIVER		06
	IC102	**XU996A00**	IC	AM26LS31CNSR	LINE DRIVER		05
	-105	**XU996A00**	IC	AM26LS31CNSR	LINE DRIVER		05
	IC106	**XT487A00**	IC	TC74VHC245F	TRANSCEIVER		03
		RD254100	Carbon Resistor (chip)	10.0 0.1 J			01
		RD255150	Carbon Resistor (chip)	150.0 0.1 J			01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J			01
		RD257220	Carbon Resistor (chip)	22.0K 0.1 J			01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
		RD257470	Carbon Resistor (chip)	47.0K 0.1 J			01
*		**V41292S0**	Circuit Board	AI8 IPC3 (IPCOM)	(XW286B0)		
*		**V41295S0**	Circuit Board	AI8 LED1 (IPCOM)	(XW286B0)		
	C304	**UR838100**	Electrolytic Cap.	100.00 16.0V			01
		FG651330	Ceramic Capacitor-SL	33P 50V J			01
		FG652100	Ceramic Capacitor-SL	100P 50V J			01
		VT439600	Monolithic Ceramic Cap.	0.100 50V Z			01
	CN100	**VE352600**	Connector Base Post	PH-14P TE			01
	CN101	**VB390400**	Connector Base Post	PH 8P TE			01
	CN200	**VB390100**	Connector Base Post	PH 5P TE			01
	CN300	**VB390100**	Connector Base Post	PH 5P TE			01
	D300	**VB941200**	Diode	1SS133,1SS176			01
	-303	**VB941200**	Diode	1SS133,1SS176			01
	EM300	**FZ006920**	LC Filter	LS MT B271KB			01
	EM301	**FZ006920**	LC Filter	LS MT B271KB			01
	EM302	**FZ006970**	LC Filter	LS MT Y223NB			02
	IC300	**XE737A00**	IC	SN75124N	LINE RECEIVER		05
	IC301	**XE683A00**	IC	SN75121	LINE DRIVER		05
	JK300	**VI552200**	BNC Connector	YKS11-0	WORD CLOCK IN		05
	JK301	**VI552200**	BNC Connector	YKS11-0	WORD CLOCK OUT		05
	K300	**VI474400**	Terminal Plate				01
	K301	**VI474400**	Terminal Plate				01
*	LD100	**V4078200**	LED Display	LNM423AS01	UNIT NO.		06
	LD101	**VR080200**	LED	SLR-342VR3F	PHANTOM MASTER		01
*	SP100	**V4411600**	Spacer	7 SEG. 2S			01
	SP101	**VB397800**	LED Spacer				01
	SW1	**VG837400**	Slide Switch	SSSB04	PHANTOM MASTER ON/OFF		03
	SW200	**VI575400**	Slide Switch	SSSU12 2/3	CONTROL INPUT PORT		02
	SW300	**VQ907900**	Slide Switch	SSSU112-S06N-1	WORD CLOCK 75ohm OFF/ON		01
		HF753470	Carbon Resistor	4.7 1/4 J			01
		HF754470	Carbon Resistor	47.0 1/4 J			01
		HF754750	Carbon Resistor	75.0 1/4 J			01
		HF756220	Carbon Resistor	2.2K 1/4 J			01
*		**V41289S0**	Circuit Board	AI8 IFC2	(XW283C0)		
	C106	**UF128470**	Electrolytic Cap. (chip)	470 10V			02
	C107	**UF038100**	Electrolytic Cap. (chip)	100 16V			01

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REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
C115	**UF017220**	Electrolytic Cap. (chip)	22 6.3V				01
C303	**UF128470**	Electrolytic Cap. (chip)	470 10V				02
C304	**UF128470**	Electrolytic Cap. (chip)	470 10V				02
C329	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
C403	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
C404	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
C412	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
C413	**UF037470**	Electrolytic Cap. (chip)	47 16V				01
	UB051220	Monolithic Ceramic Cap.	SL 22P 50V J				01
	UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z				01
	UB445330	Monolithic Ceramic Cap.	F 0.330 16V Z				01
	UA354820	Mylar Capacitor	0.0820 50V J				01
	VR327300	Mylar Capacitor (chip)	0.0820 16V J				01
CN101	**VQ045900**	Connector, FFC	52044 30P SE				02
CN102	**VQ045000**	Connector, FFC	52044 20P SE				01
CN103	**VB390200**	Connector Base Post	PH 6P TE				01
CN201	**VB390600**	Connector Base Post	PH 10P TE				01
CN501	**VK025200**	Wire Trap	52147 8P TE				01
-508	**VK025200**	Wire Trap	52147 8P TE				01
CN509	**VE352600**	Connector Base Post	PH-14P TE				01
CN510	**VB390100**	Connector Base Post	PH 5P TE				01
CN511	**VB390100**	Connector Base Post	PH 5P TE				01
CN512	**VF728300**	Wire Trap	52147 6P TE				01
CN701	**VF283100**	Connector Base Post	PH 13P TE				01
CN702	**VF283100**	Connector Base Post	PH 13P TE				01
CN703	**VB390600**	Connector Base Post	PH 10P TE				01
CN704	**VB390600**	Connector Base Post	PH 10P TE				01
CN705	**VF283100**	Connector Base Post	PH 13P TE				01
CN706	**VF283100**	Connector Base Post	PH 13P TE				01
CN707	**VB390600**	Connector Base Post	PH 10P TE				01
CN708	**VB390600**	Connector Base Post	PH 10P TE				01
CN709	**VF283100**	Connector Base Post	PH 13P TE				01
CN710	**VF283100**	Connector Base Post	PH 13P TE				01
CN711	**VB390600**	Connector Base Post	PH 10P TE				01
CN712	**VB390600**	Connector Base Post	PH 10P TE				01
EM101	**FZ006970**	LC Filter	LS MT Y223NB				02
EM102	**FZ006970**	LC Filter	LS MT Y223NB				02
IC101	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-104	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
IC105	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
* IC106	**XY102A00**	IC	HD74LVU04AFPEL		INVERTER		01
* IC107	**IS000800**	IC	HD74LV08AFPEL		AND		01
* IC108	**IS000800**	IC	HD74LV08AFPEL		AND		01
* IC109	**XY094A00**	IC	LT1118CST-2.5		REGULATOR		08
* IC201	**XW239A00**	IC	EPC1PC8		EPROM 1M		09
* IC202	**XY217A00**	IC	EPF10K50EQC208		FPGA		25
IC301	**XG948E00**	IC	YM3436DK		DIR2		11
IC302	**XG948E00**	IC	YM3436DK		DIR2		11
IC307	**XG948E00**	IC	YM3436DK		DIR2		11
* IC308	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
* IC309	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
IC401	**XG948E00**	IC	YM3436DK		DIR2		11
IC402	**XG948E00**	IC	YM3436DK		DIR2		11
IC404	**XG948E00**	IC	YM3436DK		DIR2		11
IC405	**XG948E00**	IC	YM3436DK		DIR2		11
* IC406	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
* -409	**XW422A00**	IC	M51953AFP		SYSTEM RESET		01
* IC410	**IS000800**	IC	HD74LV08AFPEL		AND		01
* IC411	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
* IC412	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01
IC501	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-504	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
* IC601	**XV989A00**	IC	YSS904-F		DSP5		11
* IC602	**XZ226A00**	IC	TC74VHCT74AF(EL)		D-FF		
* IC603	**XY772A00**	IC	TC74HC273AFEL		D-FF		
* IC604	**XY772A00**	IC	TC74HC273AFEL		D-FF		
IC701	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
-711	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
IC712	**XV242A00**	IC	TC74VHCT245AF		TRANSCEIVER		03
L101	**VS740100**	Chip Inductance	BLM21B751S 2125				03

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	REF NO.	PART NO.	DESCRIPTION			REMARKS	QTY	RANK
	-137	**VS740100**	Chip Inductance	BLM21B751S 2125				03
	L301	**GE300610**	Ferrite Bead	BL02RN1-R62T4				01
	-303	**GE300610**	Ferrite Bead	BL02RN1-R62T4				01
	L401	**GE300610**	Ferrite Bead	BL02RN1-R62T4				01
	-404	**GE300610**	Ferrite Bead	BL02RN1-R62T4				01
	RA101	**RE047100**	Resistor Array	10KX4				01
	-103	**RE047100**	Resistor Array	10KX4				01
	RA104	**RE048100**	Resistor Array	100KX4				01
	-111	**RE048100**	Resistor Array	100KX4				01
	RA112	**RE047100**	Resistor Array	10KX4				01
	RA113	**RE047100**	Resistor Array	10KX4				01
	RA501	**RE047100**	Resistor Array	10KX4				01
	-506	**RE047100**	Resistor Array	10KX4				01
	RA701	**RE047100**	Resistor Array	10KX4				01
	-706	**RE047100**	Resistor Array	10KX4				01
*	SC201	**VV047100**	IC Socket	DICF-8CS-E				01
	TA501	**VQ248400**	Transistor Array	TD62783AF				04
	TA502	**VQ248500**	Transistor Array	TD62381F				04
	X103	**VI927300**	Quartz Crystal Unit	20.0000MHz AT-49				03
	X104	**VT641400**	Quartz Crystal Unit	3119A-AQA8022.5792				08
	X105	**VQ248800**	Quartz Crystal Unit	3119A-AQA8024.576				10
	X601	**VZ156100**	Quartz Crystal Unit	60MHz DSO751S				06
		RD250000	Carbon Resistor (chip)	0.0 0.0 J				01
		RD154270	Carbon Resistor (chip)	27.0 1/4 J				01
		RD254470	Carbon Resistor (chip)	47.0 0.1 J				01
		RD254750	Carbon Resistor (chip)	75.0 0.1 J				01
		RD255100	Carbon Resistor (chip)	100.0 0.1 J				01
*		**RD255130**	Carbon Resistor (chip)	130.0 0.1 J				
		RD155330	Carbon Resistor (chip)	330.0 1/4 J				01
		RD255470	Carbon Resistor (chip)	470.0 0.1 J				01
*		**VV375100**	Carbon Resistor (chip)	750.0 0.1 D				01
		RD256100	Carbon Resistor (chip)	1.0K 0.1 J				01
		RD256330	Carbon Resistor (chip)	3.3K 0.1 J				01
*		**VV333200**	Carbon Resistor (chip)	3.3K 0.1 D				01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J				01
		RD259100	Carbon Resistor (chip)	1.0M 0.1 J				01
*		**V41288S0**	Circuit Board	AI8 MB1		(XW282A0)		
	CN101	**VU328200**	Plug	PHEC 100P TE		SLOT 1-8,UNC Card		05
	-109	**VU328200**	Plug	PHEC 100P TE				05
	CN110	**VI878600**	Cable Holder	51048 8P TE				01
	-117	**VI878600**	Cable Holder	51048 8P TE				01
	CN118	**VI878400**	Cable Holder	51048 6P TE				01
	CN119	**VQ045900**	Connector, FFC	52044 30P SE				02
	CN120	**VQ045000**	Connector, FFC	52044 20P SE				01
	CN121	**VB858300**	Connector Base Post	PH 4P SE				01
	CN122	**VB858500**	Connector Base Post	PH 6P SE				01
	CN123	**VB858300**	Connector Base Post	PH 4P SE				01
	CN124	**VB858500**	Connector Base Post	PH 6P SE				01
	CN125	**VB858300**	Connector Base Post	PH 4P SE				01
	CN126	**VB858300**	Connector Base Post	PH 4P SE				01
	CN127	**VB858400**	Connector Base Post	PH 5P SE				01
	W110	- -	Ribbon Cable	P=2.0 #26 8P 140L		(V507960)		
	-117	- -	Ribbon Cable	P=2.0 #26 8P 140L		(V507960)		
	W118	- -	Ribbon Cable	P=2.0 #26 6P 140L		(V510880)		
*		**V4128S00**	Circuit Board	AI8 UNC		(XW281B0)		
	C218	**UF038100**	Electrolytic Cap. (chip)	100 16V				01
		FG652120	Ceramic Capacitor	120P 50V K				01
		FG612560	Ceramic Capacitor	560P 50V K				01
		UB012470	Monolithic Ceramic Cap.	B 470P 50V K				01
		UB245100	Monolithic Ceramic Cap.	F 0.100 25V Z				01
	CN101	**VB390100**	Connector Base Post	PH 5P TE				01
	CN202	**VT640300**	Receptacle	PHEC 100P SE				04
	EM201	**FZ006970**	LC Filter	LS MT Y223NB				02
*	IC101	**XY715A00**	IC	PM1D42 V1.01		MASK CPU		10
	IC102	**XT487A00**	IC	TC74VHC245F		TRANSCEIVER		03
	IC103	**XP226A00**	IC	IC-PST591DMT		SYSTEM RESET		03
*	IC104	**IS000800**	IC	HD74LV08AFPEL		AND		01
*	IC105	**IS000400**	IC	HD74LV04AFPEL		INVERTER		01

*: New Parts

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	REF NO.	PART NO.	DESCRIPTION		REMARKS	QTY	RANK
*	IC201	**XV685A00**	IC	MBM29F400BC-70PFTN	FLASH ROM 4M		11
	IC203	**XV729A00**	IC	IDT71016S15Y-TR	SRAM 1M		09
	IC204	**XT487A00**	IC	TC74VHC245F	TRANSCEIVER		03
	-210	**XT487A00**	IC	TC74VHC245F	TRANSCEIVER		03
*	IC211	**IS013810**	IC	SN74LV138ANSR	DECODER		01
*	IC212	**IS013810**	IC	SN74LV138ANSR	DECODER		01
*	IC213	**IS000800**	IC	HD74LV08AFPEL	AND		01
	K201	**VI474400**	Terminal Plate				01
	K202	**VI474400**	Terminal Plate				01
*	LD101	**V3990300**	LED (chip)	TLSU1008 RE	FOR TEST		01
	RA101	**RE047100**	Resistor Array	10KX4			01
	-120	**RE047100**	Resistor Array	10KX4			01
	RA202	**RE048100**	Resistor Array	100KX4			01
	-212	**RE048100**	Resistor Array	100KX4			01
	SW102	**VQ949900**	Switch	SSGM18151A	FUNCTION		03
*	X101	**V3990700**	Ceramic Resonator	CSTCC7.16MG0H6-TC			01
		RD250000	Carbon Resistor (chip)	0.0 0.0 J			01
		RD255220	Carbon Resistor (chip)	220.0 0.1 J			01
		RD256300	Carbon Resistor (chip)	3.0K 0.1 J			01
		RD257100	Carbon Resistor (chip)	10.0K 0.1 J			01
⚠ *		**XW258B00**	Power Transformer		J		17
⚠ *		**XW259B00**	Power Transformer		U,V		18
⚠ *		**XW260B00**	Power Transformer		H,B,W		17
*		**V5789100**	Motor	DC KDE1208PTS3-6	Fan		09
⚠		**VS228900**	AC Cord Assembly	2P 15A	J		09
⚠		**VS229000**	AC Cord Assembly	3P 10A	U,V		10
⚠		**VS229100**	AC Cord Assembly	3P 6A	H,W		10
⚠		**VS229200**	AC Cord Assembly	3P 10A	B		11
⚠ *	FZ400	**KB003730**	Fuse	8.00A JU	J,U,V		01
⚠	FZ400	**KB003250**	Fuse	6.30A S	H,B,W		01
⚠	FZ100	**KB003630**	Fuse	5.00A JU	J,U,V		01
⚠	FZ100	**KB003100**	Fuse	4.00A S	H,B,W		01
⚠	FZ200	**KB003630**	Fuse	5.00A JU	J,U,V		01
⚠	FZ200	**KB003100**	Fuse	4.00A S	H,B,W		01
⚠	FZ300	**KB003590**	Fuse	3.00A JU	J,U,V		01
⚠	FZ300	**KB003090**	Fuse	3.15A S	H,B,W		01
⚠	FZ301	**KB003590**	Fuse	3.00A JU	J,U,V		01
⚠	FZ301	**KB003090**	Fuse	3.15A S	H,B,W		01
⚠	FZ400	**KB003530**	Fuse	1.00A JU	J,U,V		01
⚠	FZ400	**KB003040**	Fuse	1.00A S	H,B,W		01
⚠	FZ700	**KB003620**	Fuse	4.00A JU	J,U,V		01
⚠	FZ700	**KB003090**	Fuse	3.15A S	H,B,W		01

*: New Parts

RANK: Japan only

ANALOG INPUT BOX

AI8

CIRCUIT DIAGRAM

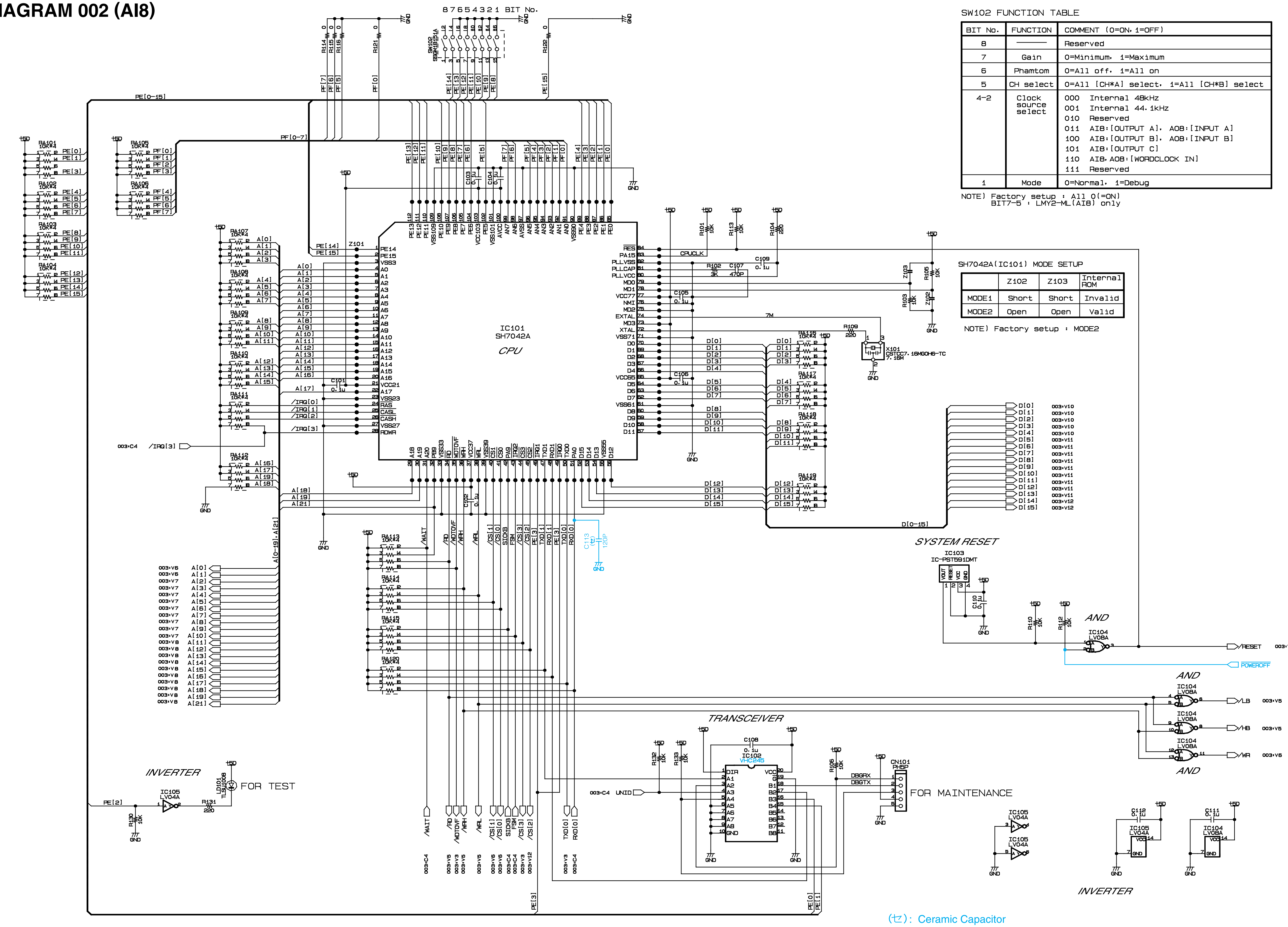
CONTENTS

WARNING

Components having special characteristics are marked ⚠ and must be replaced with parts having specification equal to those originally installed.

■ UNC CIRCUIT DIAGRAM 002 (AI8)

AI8



SW102 FUNCTION TABLE

BIT No.	FUNCTION	COMMENT (0=ON, 1=OFF)
8	———	Reserved
7	Gain	0=Minimum, 1=Maximum
6	Phamtom	0=All off, 1=All on
5	CH select	0=All [CH*A] select, 1=All [CH*B] select
4-2	Clock source select	000 Internal 48kHz 001 Internal 44.1kHz 010 Reserved 011 AI8:[OUTPUT A], AO8:[INPUT A] 100 AI8:[OUTPUT B], AO8:[INPUT B] 101 AI8:[OUTPUT C] 110 AI8, AO8:[WORDCLOCK IN] 111 Reserved
1	Mode	0=Normal, 1=Debug

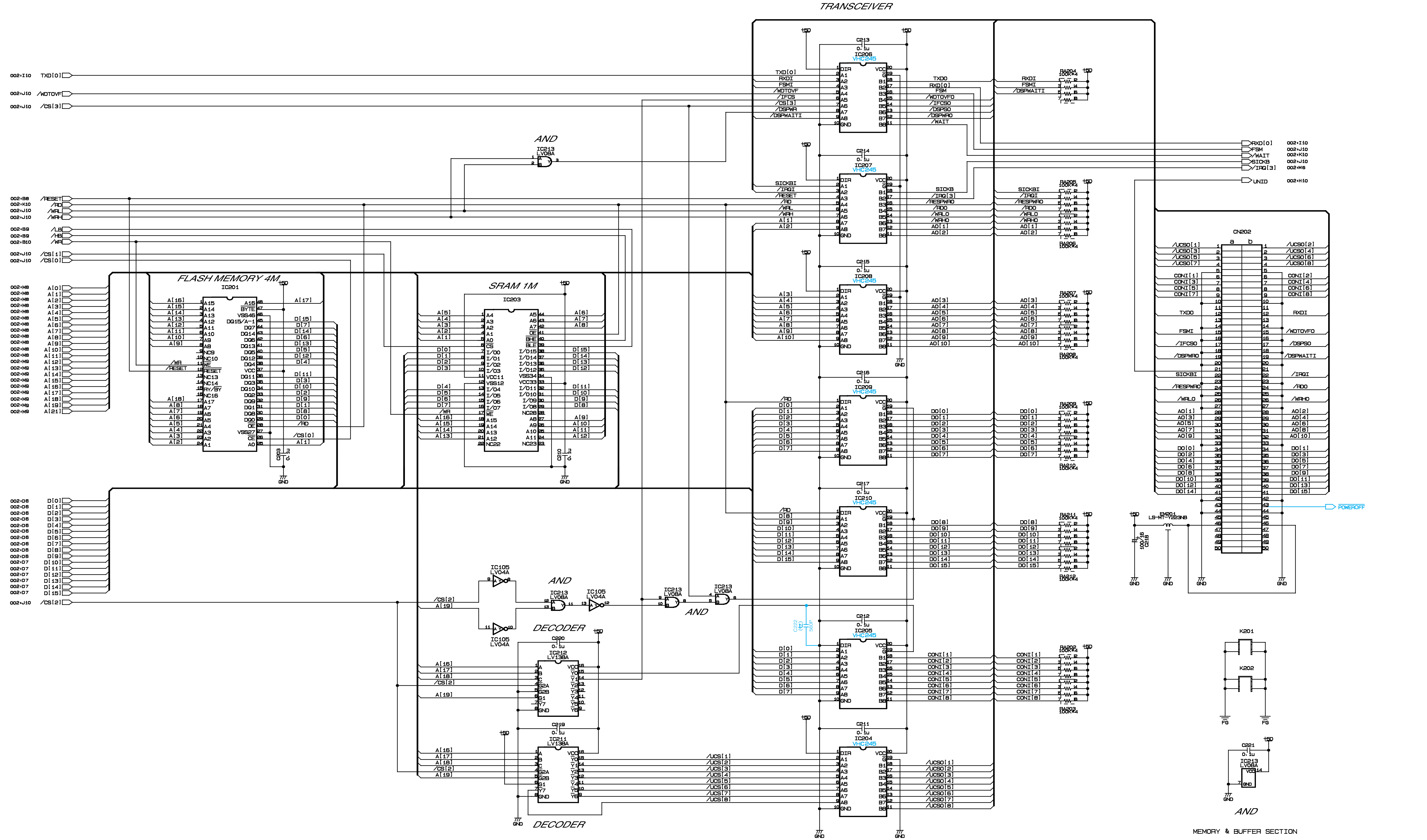
NOTE) Factory setup : All 0(=ON)
BIT7-5 : LMY2-ML(AI8) only

SH7042A(IC101) MODE SETUP

	Z102	Z103	Internal ROM
MODE1	Short	Short	Invalid
MODE2	Open	Open	Valid

NOTE) Factory setup : MODE2

■UNC CIRCUIT DIAGRAM 003 (AI8)



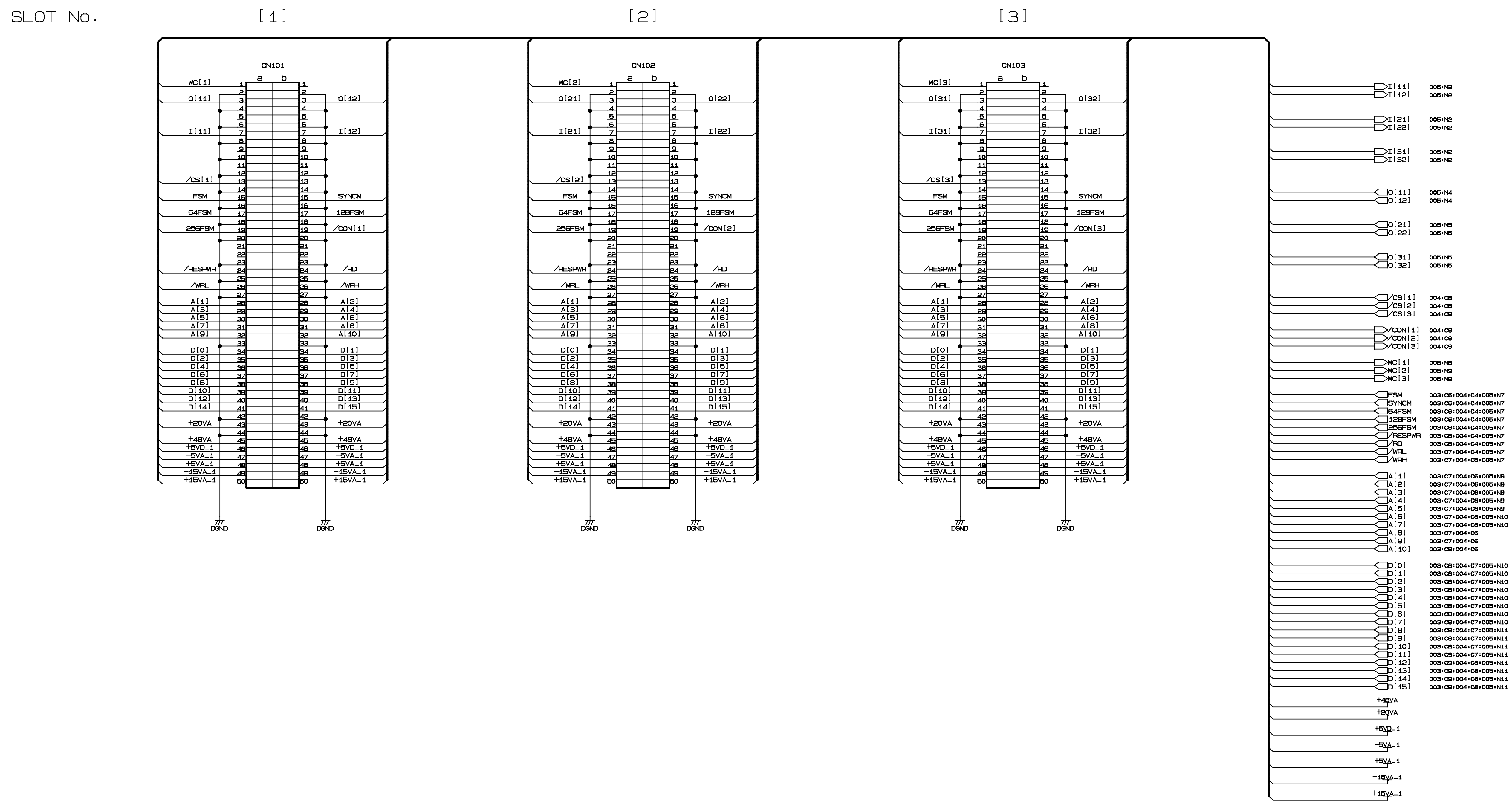
(セ) : Ceramic Capacitor

KEC-92504-3

■UNC CIRCUIT DIAGRAM 003 (AI8)

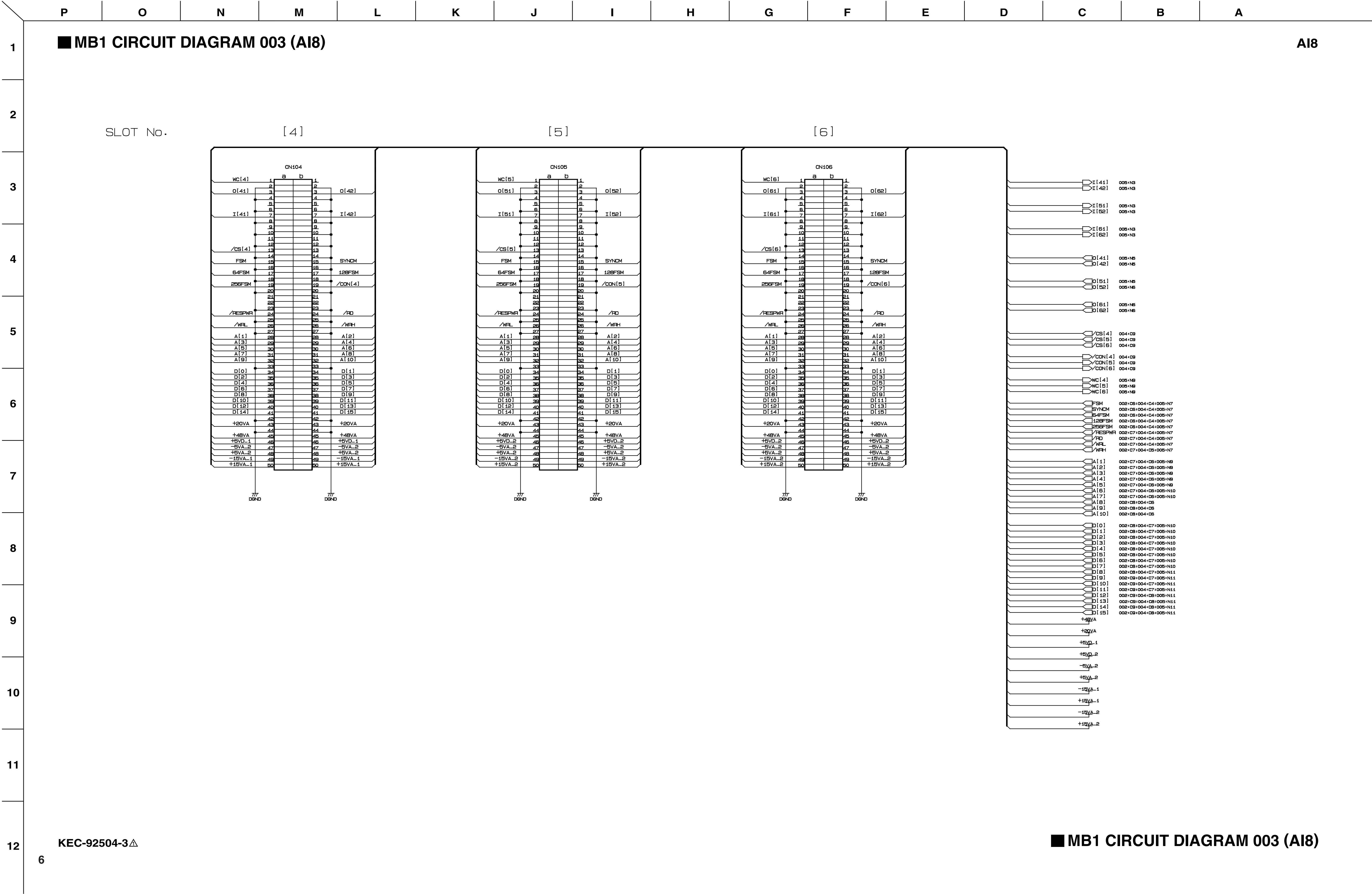
P O N M L K J I H G F E D C B A

■ MB1 CIRCUIT DIAGRAM 002 (AI8)



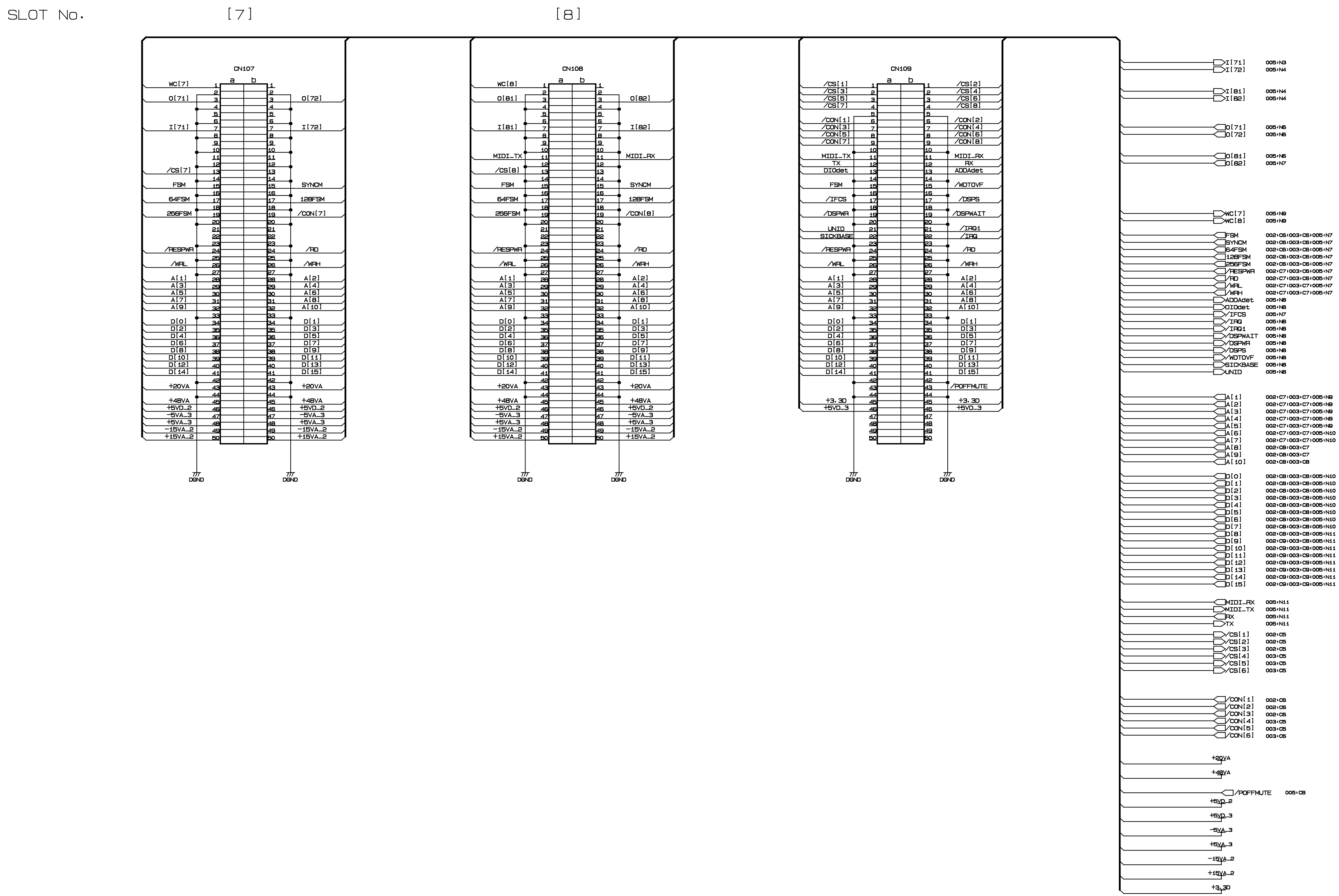
■ MB1 CIRCUIT DIAGRAM 002 (AI8)

■ MB1 CIRCUIT DIAGRAM 003 (AI8)

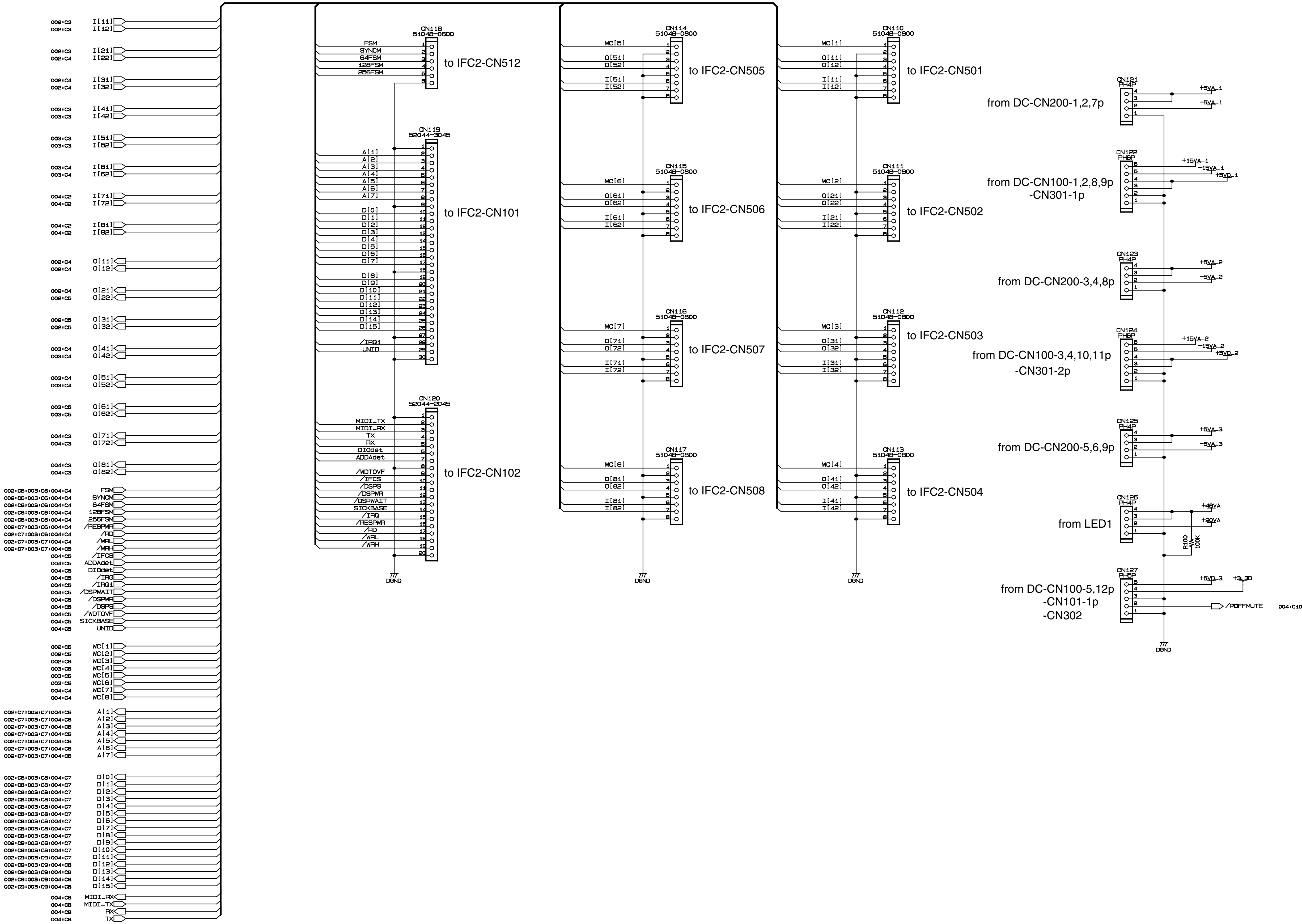


■ MB1 CIRCUIT DIAGRAM 003 (AI8)

■ MB1 CIRCUIT DIAGRAM 004 (AI8)



MB1 CIRCUIT DIAGRAM 005 (AI8)

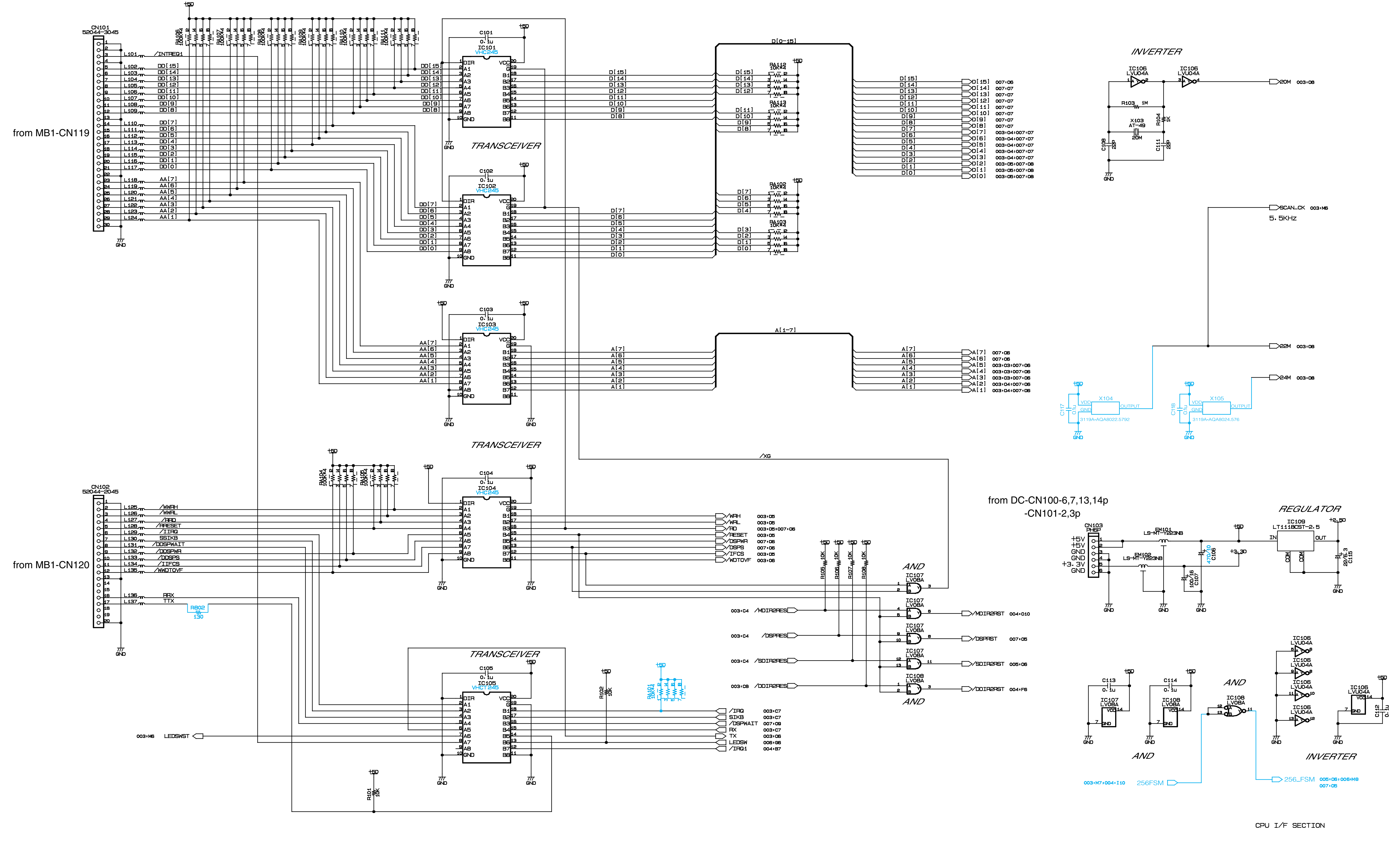


KEC-92505-5⚠

MB1 CIRCUIT DIAGRAM 005 (AI8)

IFC2 CIRCUIT DIAGRAM 002 (AI8)

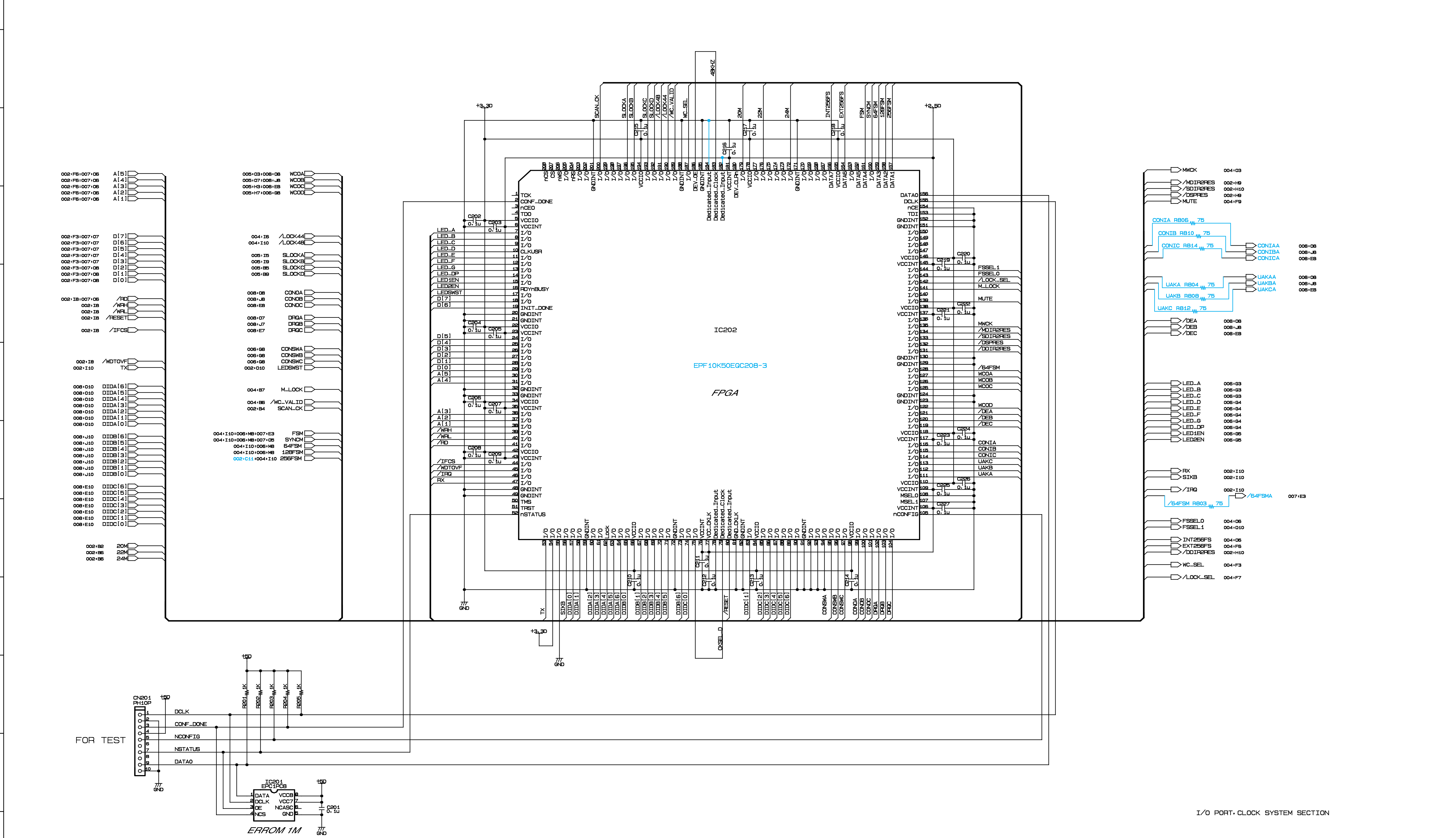
AI8



KEC-92506-2

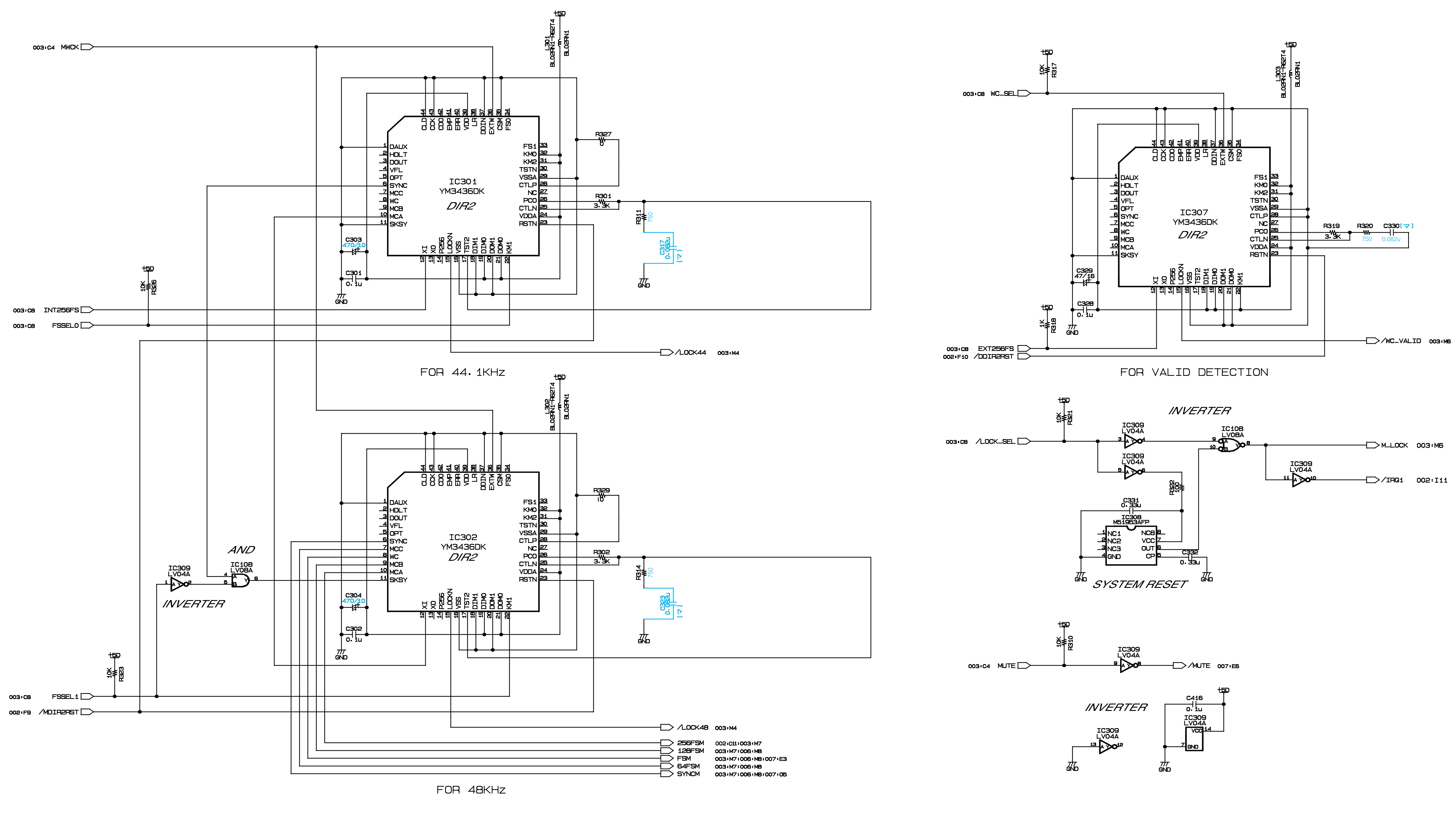
IFC2 CIRCUIT DIAGRAM 002 (AI8)

■IFC2 CIRCUIT DIAGRAM 003 (AI8)



■IFC2 CIRCUIT DIAGRAM 003 (AI8)

■ IFC2 CIRCUIT DIAGRAM 004 (AI8)

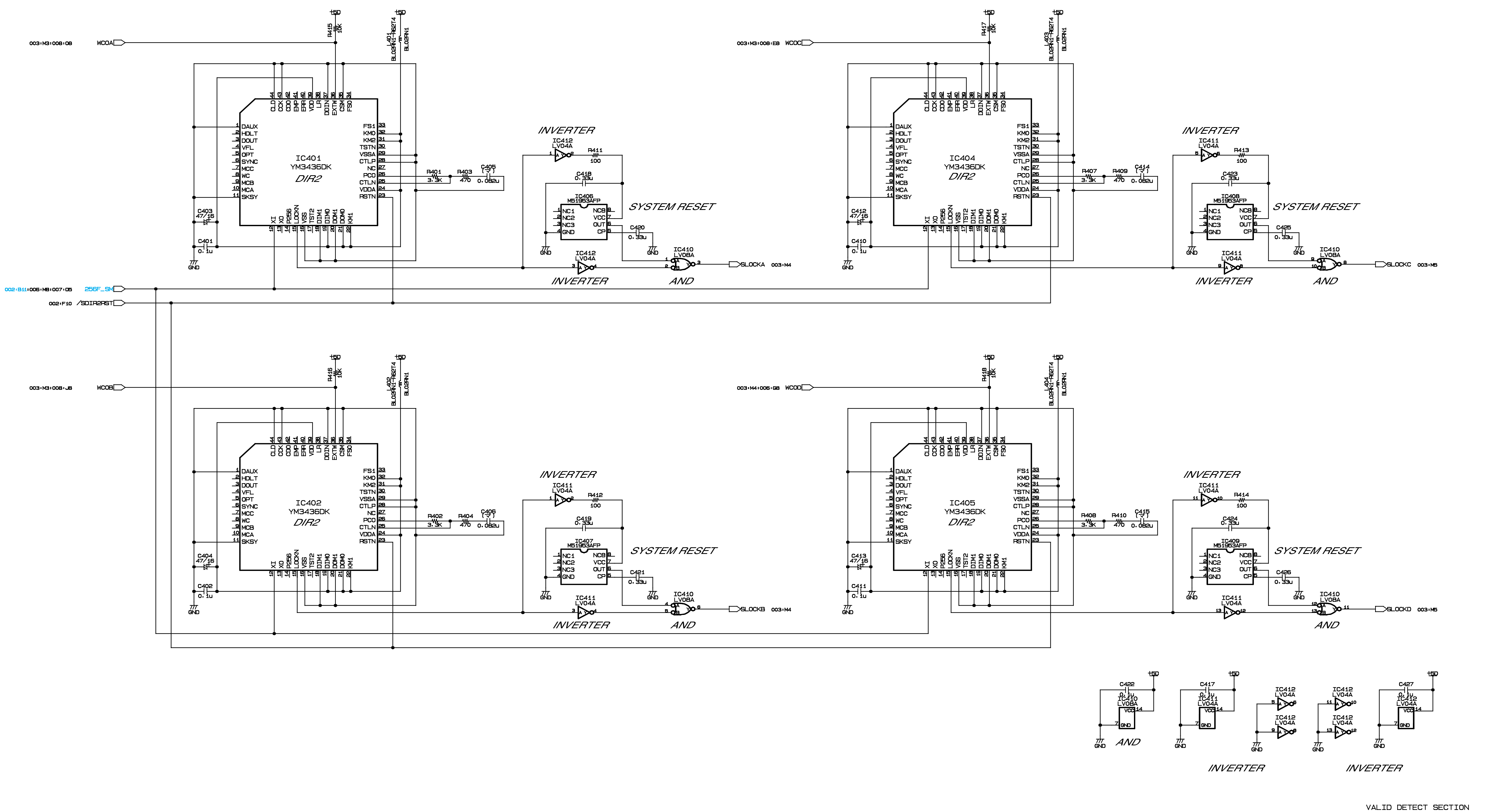


(F) : Metal Film Resistor
(マ) : Mylar Capacitor

■ IFC2 CIRCUIT DIAGRAM 004 (AI8)

IFC2 CIRCUIT DIAGRAM 005 (AI8)

AI8



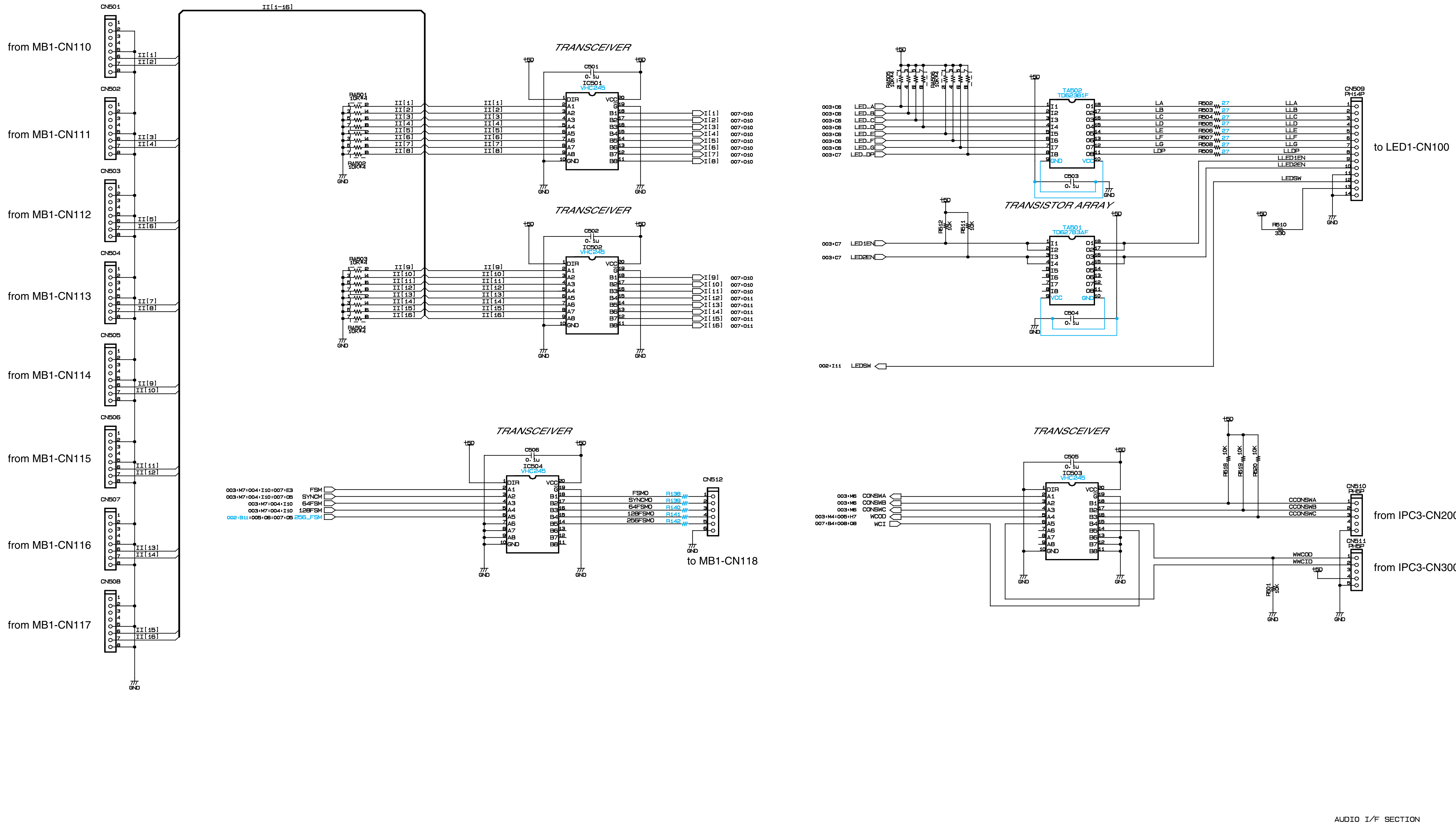
(マ): Mylar Capacitor

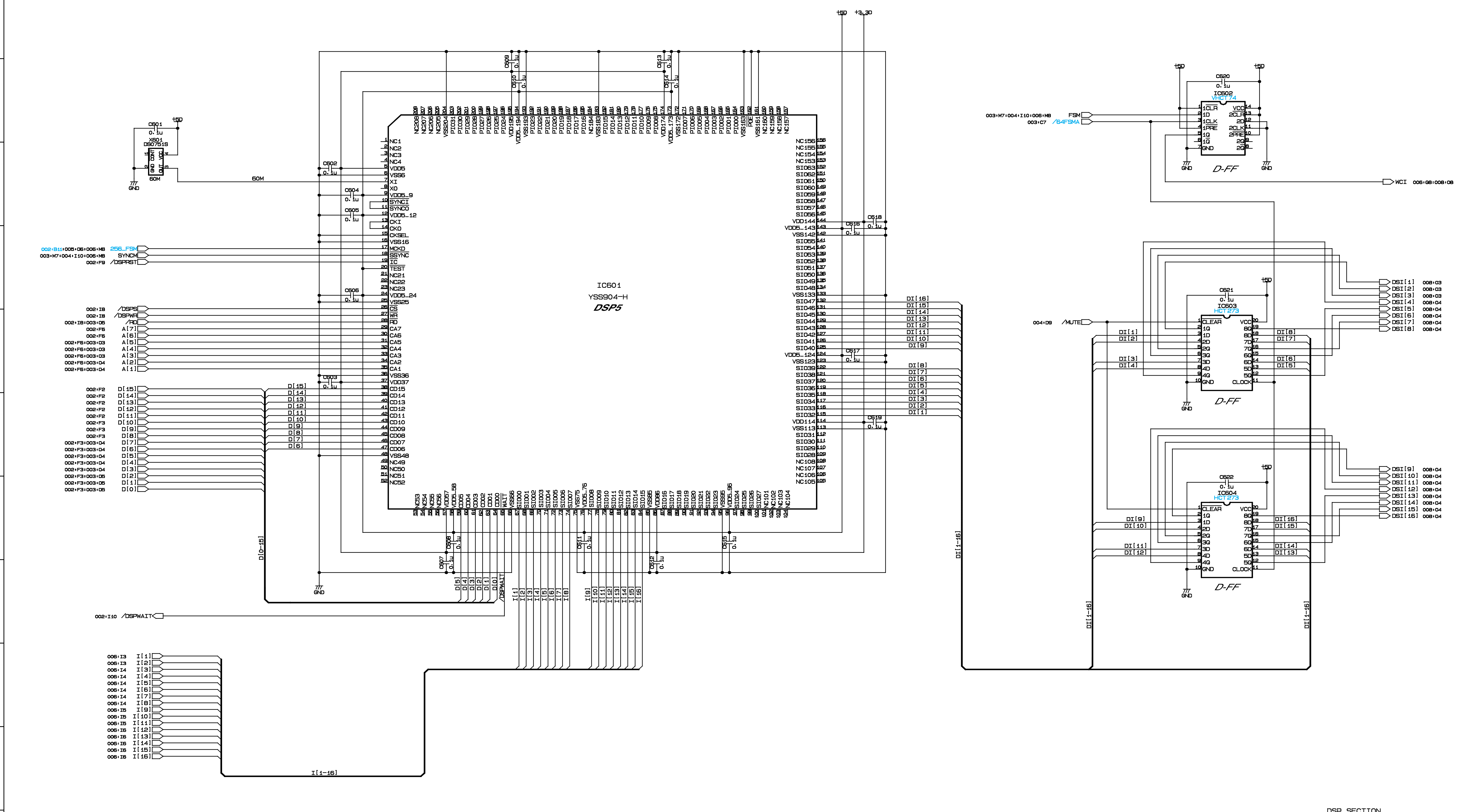
KEC-92506-5

IFC2 CIRCUIT DIAGRAM 005 (AI8)

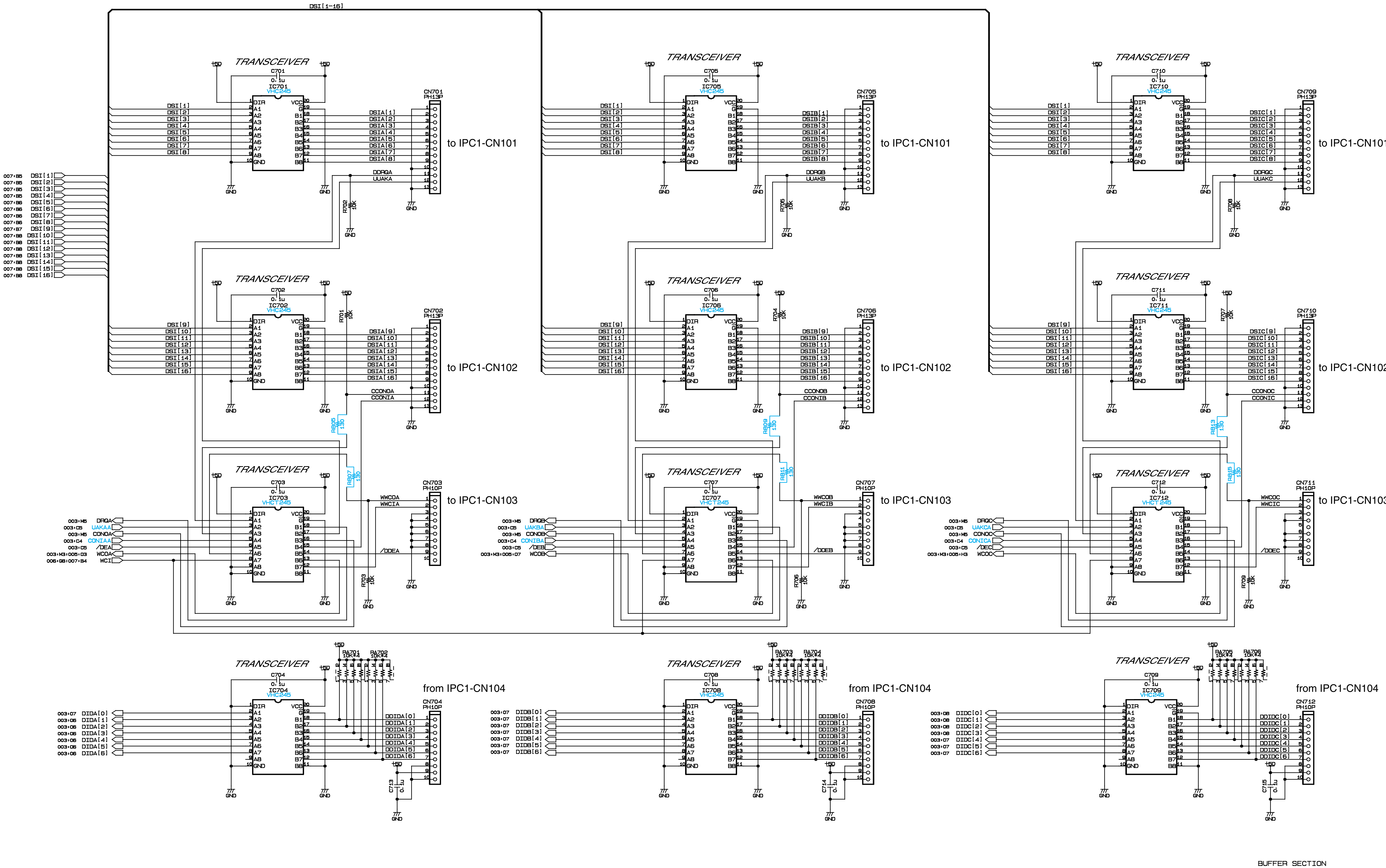
IFC2 CIRCUIT DIAGRAM 006 (AI8)

AI8



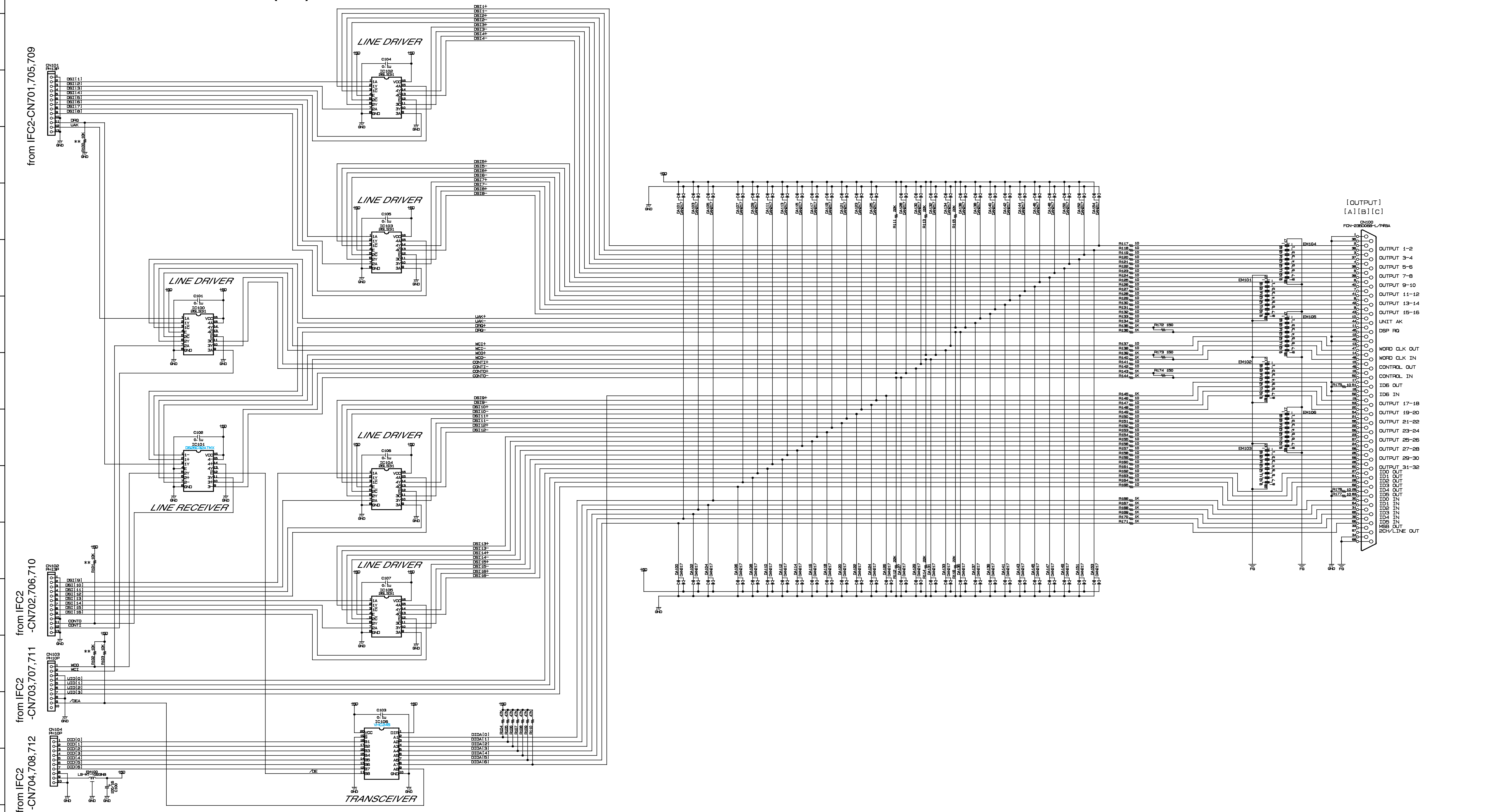

IC601
YSS904-H
DSP5
IC602
VHCT74
D-FF
IC603
HCT273
D-FF
IC604
HCT273
D-FF
X601
60M
DSP SECTION

■IFC2 CIRCUIT DIAGRAM 008 (AI8)



■IPC1 CIRCUIT DIAGRAM (AI8)

AI8



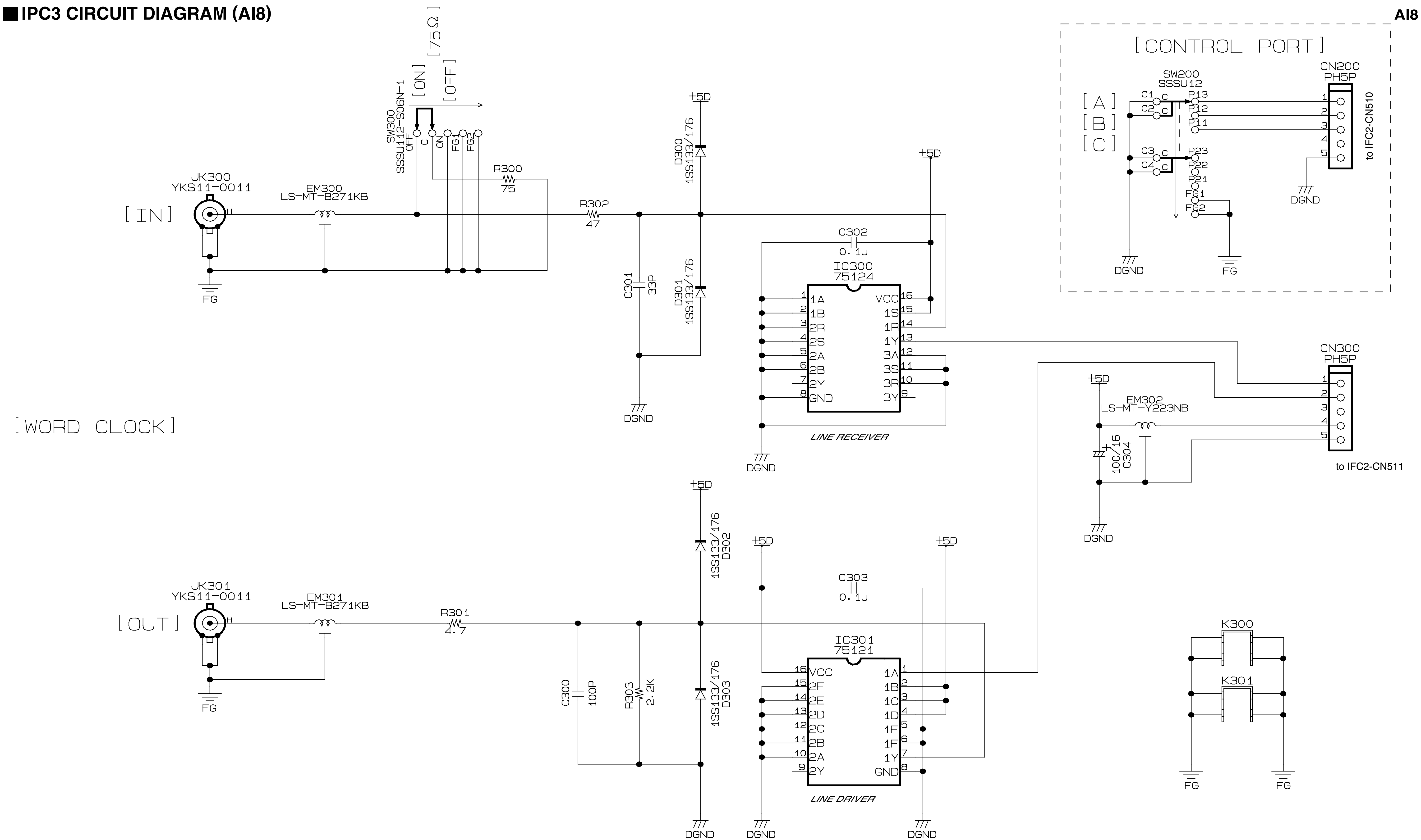
**: Not Installed

KEC-92507-1

■IPC1 CIRCUIT DIAGRAM (AI8)

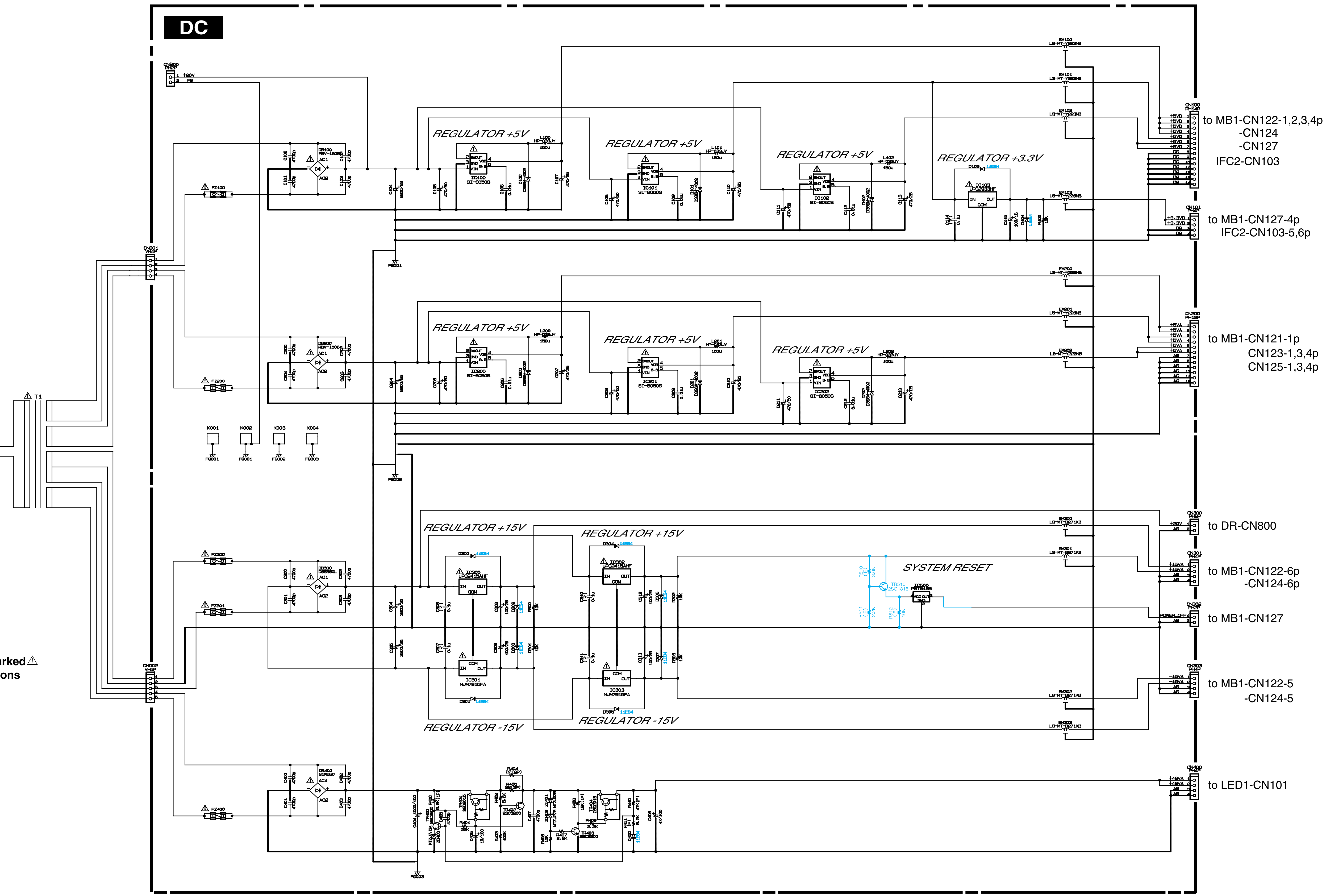
■IPC3 CIRCUIT DIAGRAM (AI8)

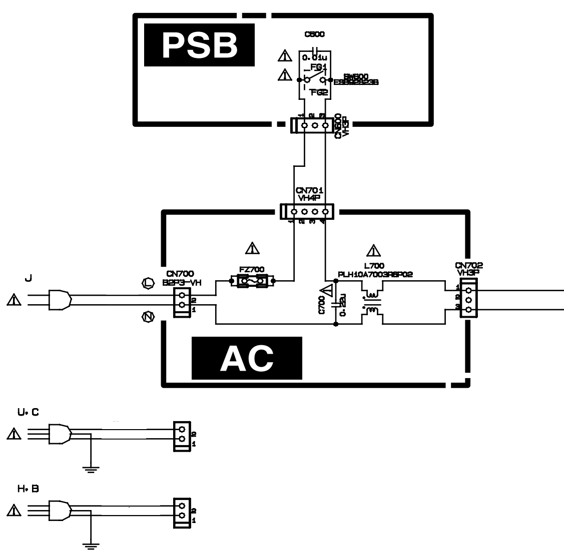
AI8



■IPC3 CIRCUIT DIAGRAM (AI8)

AICOM CIRCUIT DIAGRAM 002 (AI8)





TO SERVICE PERSONNEL

Critical Components Information
Components having special characteristics are marked ⚠ and must be replaced with parts having specifications equel to those originally installed.

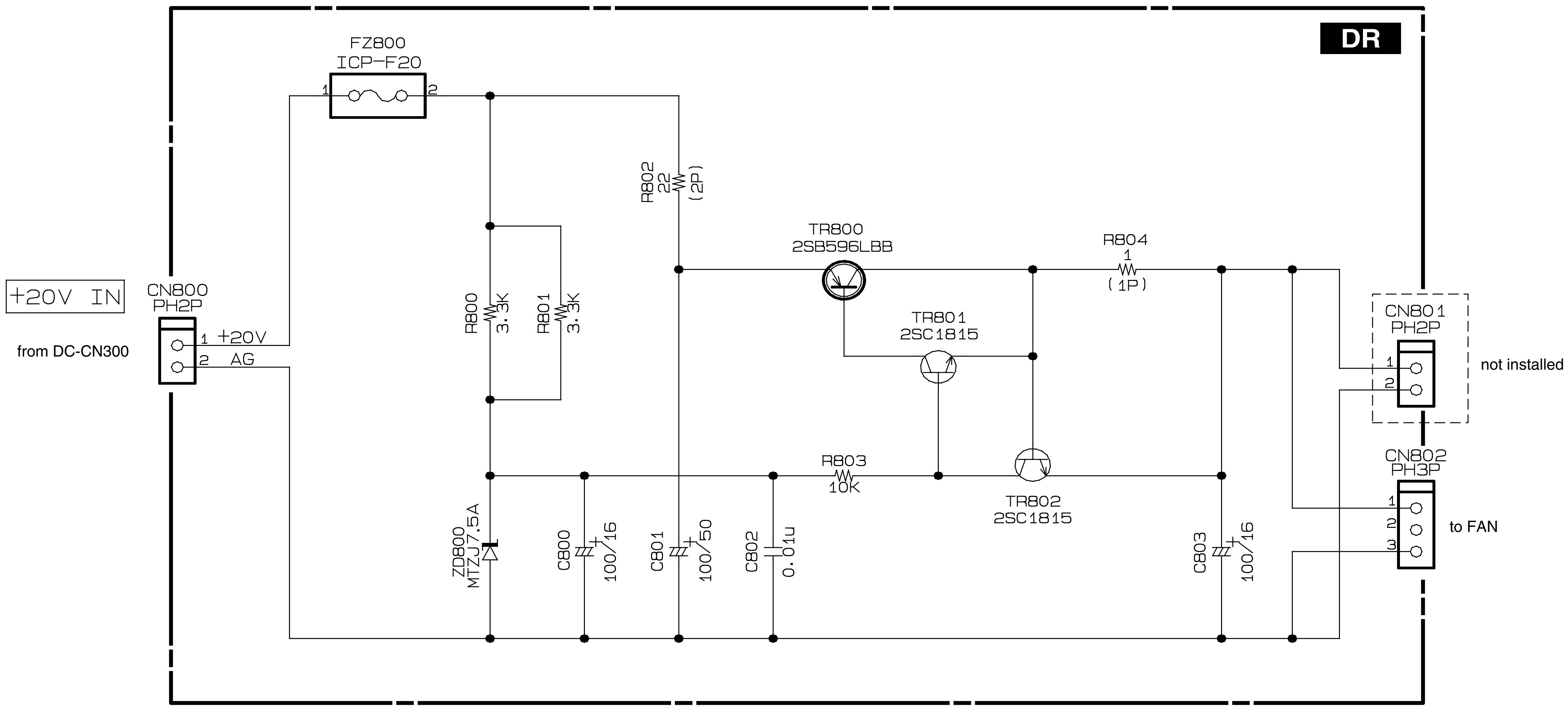
	J. U. C	H. B
FZ700	4A 125V	T3. 15AL 250V
FZ100	5A 125V	T4AL 250V
FZ200	5A 125V	T4AL 250V
FZ300	3A 250V	T3. 15AL 250V
FZ301	3A 250V	T3. 15AL 250V
FZ400	1A 250V	T1AL 250V

(マ): Mylar Capacitor
(F): Metal Film Resistor

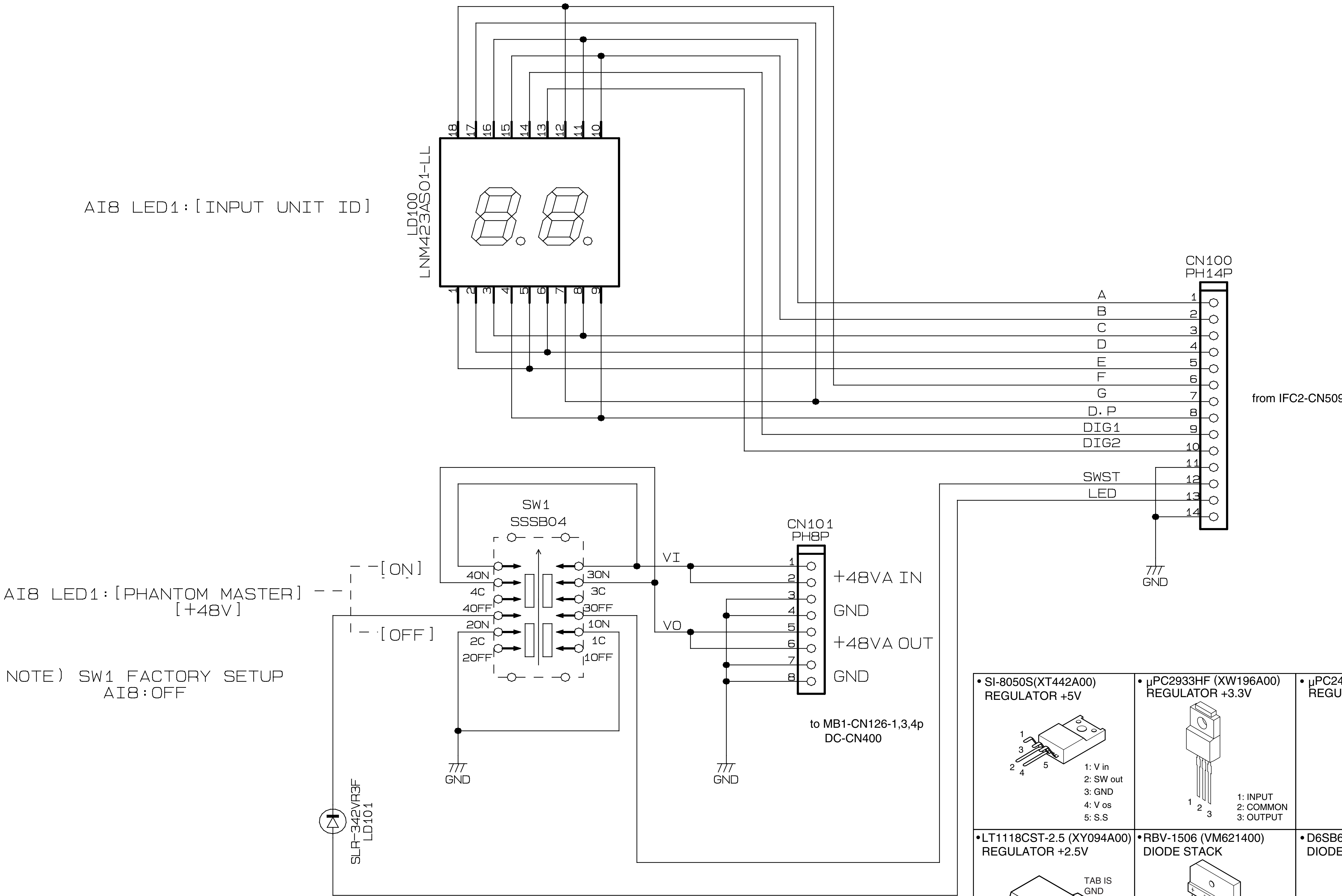
KEC-92509-2 ⚠

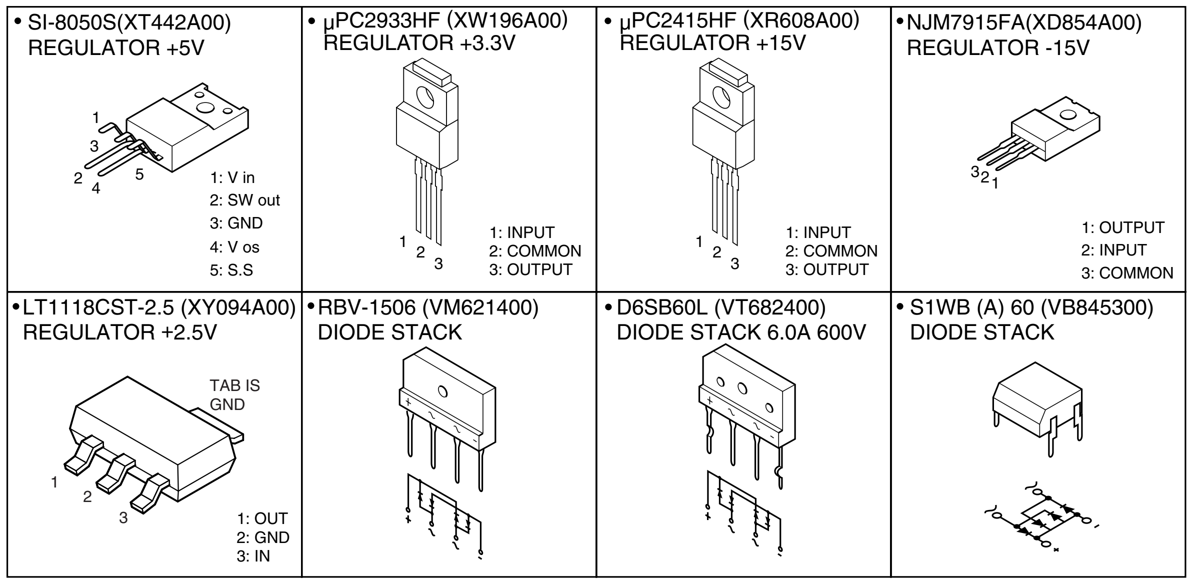
AICOM CIRCUIT DIAGRAM 002 (AI8)

■ AICOM CIRCUIT DIAGRAM 003 (AI8)



■LED1 CIRCUIT DIAGRAM (AI8)





■LED1 CIRCUIT DIAGRAM (AI8)